PETITION FOR AMENDMENT
TO UPGRADE THE ADVANCED GAS PATH TECHNOLOGY OF THE COMBUSTION TURBINES
AND
TO CONFORM AIR QUALITY CONDITIONS OF CERTIFICATION WITH THE PERMIT CONDITIONS OF THE REVISED PERMIT TO OPERATE

PALOMAR ENERGY CENTER
(01-AFC-24C)

By:

SDGE
A Sempra Energy utility®

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

With assistance from:

AECOM

AECOM TECHNICAL SERVICES, INC.

Submitted to:
CALIFORNIA ENERGY COMMISSION

February 22, 2013

PETITION FOR AMENDMENT TO UPGRADE THE ADVANCED GAS PATH TECHNOLOGY OF THE COMBUSTION TURBINES AND TO CONFORM AIR QUALITY CONDITIONS OF CERTIFICATION WITH THE PERMIT CONDITIONS OF THE REVISED PERMIT TO OPERATE

PALOMAR ENERGY CENTER (01-AFC-24C)

1.0 INTRODUCTION

Pursuant to 20 California Code of Regulations Section 1769(a)(1), San Diego Gas & Electric Company (SDG&E) is filing this petition for the following two proposed amendments:

1) upgrade the advanced gas path (AGP) technology for two existing General Electric (GE) Frame 7-FA combined cycle combustion gas turbines (CCGT) for improved operational efficiency; and
2) amend certain air quality conditions of certification adopted by the California Energy Commission for the Palomar Energy Center (PEC), Docket 01-AFC-24, for consistency with the most recent San Diego County Air Pollution Control District (SDAPCD) air permits to operate (PTO).

The purpose of the proposed AGP technology upgrade for two existing GE CCGTs is to improve efficiency through improved heat rate and increased output without increasing the emission limits.

The purpose of the proposed amendment to update certain air quality conditions is to conform requirements originally contained in the Final Determination of Compliance (FDOC) issued by the SDAPCD and carried over into air quality conditions of certification in the Commission's Final Decision issued in August 2003, with the conditions set forth in the SDAPCD PTO issued on June 1, 2011 and renewed in August 2012. The amendments to the PTO were in large part due to revisions to SDAPCD Rule 69.3.1, which caused the SDAPCD to make substantial changes to the PTO for the PEC.

The proposed amendments comply with all laws, ordinances, regulations and standards (LORS) and do not have a significant environmental impact, as further described below. The proposed AGP technology upgrade will not result in increased permitted emissions and will have no incremental impact on property owners, the public, or any other parties. The proposed amendments to air quality (AQ) conditions do not relax and in many cases increase the stringency of the conditions included in the original FDOC.

2.0 DESCRIPTION OF PROPOSED MODIFICATION (Sec. 1769(a)(1)(A))

2.1 Upgrade of Turbine Advanced Gas Path Technology

SDG&E proposes to upgrade the AGP technology on existing Power Station Unit No. 1 and Power Station Unit No. 2, rated at 165 megawatts (MW) each. GE has made advancements in the hot gas path components and control system to improve fuel delivery and overall performance. The improved aerodynamics, seals and cooling design provide higher efficiency performance and greater power output.

The increase in efficiency will be accomplished by increasing the CCGT firing temperature, reducing clearances between parts in the compressor station, and by installing low pressure-drop combustion liners. The existing hot gas path components such as buckets, shrouds, nozzles, and associated structural elements will be replaced with functionally identical equipment designed to operate at higher temperatures. Replacement of the hot gas path components and additional sensors, instrumentation, controls, blowers, and piping will be included with the AGP technology to support increased operating temperatures; the parts will be fabricated from temperature resistant alloys. The proposed modification will increase the electrical output of each turbine by approximately 5.4 percent, from a nominal 165 megawatts (MW) to 174 MW.

Essentially the same upgrades to the AGP technology of the combustion turbines were proposed for the Los Medanos Energy Center (98-AFC-1C) in April, 2011. In that case, the Commission agreed that the upgrades would not cause increased emissions or other issues. The amendment petition was approved by the Commission in May, 2011.

2.2 Modifications of Air Quality Conditions

The revised PTO is set forth in Appendix 1. Suggested revised conditions of certification are set forth in Appendix 2. These conditions integrate the revised PTO into the Commission's current air quality related Conditions of Certification. Therefore, this petition is being submitted to:

1. Make the Conditions of Certification consistent with the latest SDAPCD PTO;
2. Incorporate SDAPCD's revisions to Rule 69.3.1 Stationary Gas Turbine Engines;
3. Incorporate EPA's revisions to 40 CFR 75 Monitoring Plan Submittals and Recertifications; and
4. Remove conditions that were completed during construction, commissioning and initial operations and are now obsolete.

3.0 TIMING (Sec. 1769(a)(1)(C) and (D))

3.1 Upgrade of Combustion Turbine Advanced Gas Path Technology

The upgrades to the AGP system are to incorporate new technology now available from GE. It could not be foreseen during the Licensing process that these changes would be made. SDG&E requests that the proposed AGP technology upgrades be approved as there are no significant impacts as a result of installation and operation. The upgrades will improve efficiency without impacting existing permit conditions or emission limits. SDG&E is proposing to install the upgrades during an upcoming turnaround in spring 2014, if approved.

3.2 Modifications of Air Quality Conditions

During commissioning of the power plant certain issues (described further in section 4.0 below) arose concerning startup requirements, including a conflict between certain provisions of the FDOC and a SDAPCD rule (Rule 69.3.1). Resolution of these issues required a rule change which was not completed and made effective until February 24, 2010, largely because of resolution of changes in the rule completely unrelated to operation of the PEC. In the meantime, variances were requested by SDG&E and issued by the SDAPCD Hearing Board. A number of Start Up Authorizations were also issued by the SDAPCD. These Authorizations contained detailed conditions that were based upon those included in the SDAPCD's original FDOC. However, during commissioning and thereafter, the SDAPCD staff and plant operators worked to resolve a number of potentially confusing conditions that were hampering reporting and enforcement reviews. Certain conditions relating solely to the construction and commissioning period were deleted as no longer needed. Also, a revision was made in startup conditions to improve understanding and enforcement and also to reflect certain requirements of the Hearing Board to take actions to reduce emissions during startup. A change was also made to provisions related to limits during combustor tuning. As a result, a number of largely administrative changes were adopted into the Start Up Authorization conditions that varied from those contained in the FDOC. Because of the time taken to complete the required amendments to Rule 69.3.1, the SDAPCD was also delayed in issuing its final PTO until June 1, 2011. This petition could not be submitted until the SDAPCD completed its rulemaking process and issued the revised PTO on June 1, 2011. In prior discussions with Commission staff both parties agreed, in order to avoid multiple amendments, not to submit changes for adoption by the Commission as amendments to conditions of certification until after all necessary revisions had been made by the SDAPCD. SDG&E then opted to wait until after the PTOs were renewed in August, 2012, when the facility operator was certain that compliance could be maintained with the new conditions before filing this amendment petition.

4.0 NECESSITY (Sec. 1769(a)(1)(B))

4.1 Upgrade of Turbine Advanced Gas Path Technology

The proposed AGP technology upgrades are necessary to improve performance, operational flexibility, fuel capability, and serviceability. The new AGP components are more durable and extend the equipment maintenance intervals. At full load, compared to normal operating conditions, the AGP upgrades will result in increased fuel usage of approximately 1.5 percent; however, normal operating modes for the CCTGs' occur in low load and would contribute to additional fuel usage reductions during equipment operation. In addition, the proposed upgrades will allow SDG&E to meet customer energy demands more efficiently without affecting existing emission limits.

4.2 Modifications of Air Quality Conditions

The proposed amendments are needed to conform the Commission's conditions to those of the SDAPCD. Proposed changes to air related conditions fall into three categories. The first category relates to startup and combustor tuning conditions. The second category relates to administrative changes dealing with reporting and to improve understanding and enforceability of the conditions. The third category relates to deletion of obsolete conditions such as conditions dealing with commissioning. These three categories are discussed further below.

4.2.1 Start Up and Combustor Tuning Related Conditions

The following subsections provide an overview of startup and tuning operations and identify the conditions requiring changes for consistency with the amended SDAPCD Rule 69.3.1 and revised PTO.

4.2.1.1 Start Up

The NOx and CO emissions during startup (and combustor tuning) are highest during the initial time when the first CCGT is held at low load. In the process of revising the PTO, SDG&E proposed hourly limits that were more stringent than the original FDOC for these conditions. SDG&E also proposed replacing the startup "with post-combustion control" limits (e.g., replacing AQ-21) with a condition to inject ammonia earlier during startup to lower the startup emissions. The SDAPCD approved these changes for the revised PTO and removed the conditions pertaining to startup "with post-combustion control." Thus, applying the suggested changes to the Commission's AQ conditions for startup will achieve the same result without increasing annual emissions.

The original SDAPCD FDOC/PTO permit conditions for the PEC related to startup were amended and clarified for consistency with the experience obtained during commissioning and subsequent operations, and the revised SDAPCD Rule 69.3.1. The revised PTO is provided in Appendix 1. These changes were made without allowing additional annual emissions. Therefore, SDG&E is requesting the Commission to amend and to clarify the following permit conditions:

- Streamline conditions AQ-21 and AQ-24. Provide a single limit of 400 pounds per hour (lbs/hr) of NOx for either one or two CCGT's in operation. This limit is more stringent than the current "operating without any post-combustion" control limits provided in the Commission's AQ conditions.
- Streamline conditions AQ-22 and AQ-26. Provide a single limit of 2,000 lbs/hr of CO for either one or two CCGT's in operation. This limit is one half the current "operating without any post-combustion" control limit for both CCGT's and equivalent to the emissions allowed for one CCGT.
- Streamline conditions AQ-20 and AQ-27 to comply with revised District Rule 69.3.1. The more stringent limit applies. Provide a single concentration limit of 11.8 ppm (calculated as NOx at 15% oxygen on a dry basis) and exempt startup, shutdown and low load as defined in SDAPCD Rule 69.3.1.

The current Commission AQ-20 and AQ-27 conditions are based on the old version of SDAPCD Rule 69.3.1. The SDAPCD revised Rule 69.3.1, clarifying the applicable limit for units with installed control equipment and specifying exemptions for startup and other conditions such as operating at low loads (e.g., combustor tuning). The revised SDAPCD Rule 69.3.1 limit for units without installed post-combustion control equipment does not apply to PEC. Therefore, AQ-27 should be eliminated.

Suggested revised conditions of certification are set forth in Appendix 2. These changes to the startup limits are considered administrative since no change is requested in PEC's annual potential to emit. Additionally, maximum hourly emissions of NOx and CO allowed during startup are requested to be cut in half or less. Updating the Commission AQ conditions will provide consistency with revised SDAPCD Rule 69.3.1 and the revised PTO, and will be easier to determine the status of compliance.

4.2.1.2 Combustor Tuning Condition

The dry low NOx (DLN) combustion systems require periodic tuning (i.e., maintenance) to account for changes in ambient conditions, fuel conditions, and normal component wear. SDG&E conducts DLN tuning in accordance with GE's fleet-wide recommendations. One

CCGT will be tuned at a time. The actual time required per event may vary in accordance with the limits provided in the revised PTO.

DLN tuning is similar to the startup modes of operation in that the CCGT is brought up to full speed no load (FSNL), then a load is applied, and gradually increased during the tuning event. However, the load fluctuates during the course of ramping up to higher loads. During the first hour of tuning, the CCGT changes operation from FSNL to approximately 15 percent load. During the second hour of tuning, the CCGT's load is decreased to approximately 10 percent, then gradually stepped up to approximately 25 percent load. The CCGT is held at 25 percent load for approximately one hour. During the next hour of testing, the load is gradually increased to 50 percent load. The CCGT is held between 50 and 55 percent load for approximately one hour. This completes the typical DLN tuning event. Each DLN tuning event may vary depending on the equipment and component response during the course of tuning, as well as in response to unknown factors that may be encountered and the procedure may have to be repeated until satisfactory results are obtained.

At combustion turbine loads below 50 percent, GE "Mode 6" combustion is not available. In addition, the CCGT exhaust parameters associated with low load conditions (e.g., low exhaust temperature) will drop below the selective catalytic reduction (SCR) manufacturer's recommended operating temperature for ammonia injection. The oxidation catalyst effectiveness will vary with its operating temperature and will generally be below its effective operating temperature. For all of these reasons, during DLN tuning, PEC is unable to comply with emission limitations applicable to normal operations.

The peak hourly emission estimates for tuning events are equal to or less than the maximum emissions measured for startups (e.g., 400 lbs/hr of NOx and 2,000 lbs/hr of CO). Therefore, SDG&E is requesting the Commission to amend and to clarify the permit conditions by incorporating tuning events into the startup limits and excluding tuning events from the standards imposed for normal operations. The exclusions for tuning are consistent with the revised SDAPCD Rule 69.3.1. Suggested revised conditions of certification are set forth in Appendix 2.

4.2.2 Administrative Changes

This petition also proposes administrative changes to the Commission AQ conditions and the addition of several new AQ conditions that will align the Commission's AQ conditions of certification with the revised SDAPCD PTO. Appendix 3 provides a side-by-side comparison of AQ conditions with SDAPCD PTO conditions. In addition to the side-by-side comparison, some new SDAPCD PTO conditions that do not have an AQ equivalent are identified. For example, SDAPCD issued new permit conditions to inject ammonia early, which helps to

reduce startup emissions, and new permit conditions to clarify monitoring and reporting, as well as to formalize the applicable emission limit of SDAPCD Rule 69.3. These new conditions improve understanding and enforceability and help to make compliance more straightforward. Thus, addition of these conditions is considered administrative.

SDG&E recommends modifying the AQ conditions to match the SDAPCD PTO conditions and adding the new SDAPCD PTO conditions to the Commission's AQ conditions of certification. The following is a list of the effected Commission AQ conditions that will need modification or will need to be added to the Commission's conditions. A full Commission/SDAPCD condition comparison has been provided and is available in Appendix 3.

List of CEC AQ Conditions that require administrative changes:

AQ Conditions related to "Reporting"

AQ-SC7, AQ-8, AQ-9, AQ-13, AQ-14, AQ-15, AQ-16, AQ-17, AQ-19, AQ-31, AQ-32, AQ-33, AQ-34 (AQ-SC11), AQ-35, AQ-36, AQ-37, and AQ-42

AQ Conditions related to "Enforcement"

AQ-SC8, AQ-SC9, AQ-1, AQ-12, AQ-29, AQ-39, AQ-40, AQ-41, AQ-46, AQ-47, AQ-50, AQ-51, AQ-52, and AQ-53

4.2.3 Obsolete Conditions

This petition proposes the removal of obsolete conditions that are no longer required to meet regulatory compliance and are not part of the daily operations of the facility. The obsolete conditions listed in this summary are related to facility commissioning, facility construction, or completed facility operations. The listed conditions have been eliminated from the final SDAPCD PTO and, therefore, should be removed from the Commission's AQ conditions. The following is a list of the obsolete AQ conditions; however, a full description of the AQ conditions to be deleted can be found in Appendix 4.

Obsolete Construction Conditions:

AQ-SC1 through AQ-SC6, AQ-SC10, AQ-4, AQ-5, AQ-6

Obsolete Commissioning Conditions:

AQ-23, AQ-28, AQ-30, AQ-49

Obsolete Operational Conditions:

AQ-10, AQ-11, AQ-43, AQ-44, AQ-45, AQ-55

5.0 ANALYSIS OF THE EFFECT OF THE MODIFICATIONS ON THE ENVIRONMENT (Sec. 1769(a)(1)(E))

5.1 Upgrade of Turbine Advanced Gas Path Technology

The proposed AGP technology upgrade will have no significant effects on any of the technical areas analyzed in the August 2003 Final Commission Decision. Air quality is the only environmental impact area potentially implicated by the proposed modifications. The proposed AGP technology upgrade will result in increased power output and slightly increased fuel usage at full load without resulting in increased emissions, as presented in Table 1. The increase in fuel flow will only occur at full load, while decreasing fuel use during normal operating modes, and will not result in emissions in excess of the emissions limits established in the FDOC or PTO. SDG&E will continue to maintain compliance with operating conditions, applicable limits established in the FDOC, and the revised PTO.

Table 1: Turbine Advanced Gas Path Values (Current and Proposed)

Component	GE 7FA (Current)	GE 7FA.04 (Proposed)	Applicable AQ Condition
Nominal MW	165	174	NA
Gas Turbine Heat Rate (Btu/kWh)	10,305	9,931	NA
Fuel Flow (lb/sec)	20.6	20.9	NA
NOx (ppmvd)	2.0	2.0	AQ-31
CO (ppmvd)	4.0	4.0	AQ-32
VOC (ppmvd)	2.0	2.0	AQ-33
PM10 /PM2.5 (lb/hr)[a]	14	14	AQ-42
SO_2[b]	PUC Quality	PUC Quality	AQ-8

Notes:

a. Source test reports indicate 3 run average values well under 14 lb/hr for PM10. Therefore no change in the permit condition is needed for the proposed AGP. PM2.5 is assumed to be the same or less than PM10.

b. The SO_2 emission factor used in the Commission's analyses is equal to 0.75 grains per 100 standard cubic feet. There is no increase in sulfur emissions because a minor increase in fuel use is outweighed by more stringent natural gas standards.

5.2 Modifications to Air Quality Conditions

The requested amendments to the Commission conditions of certification will have no significant effects on any of the technical areas analyzed in the August 2003 Final Commission Decision. Changes relate only to AQ conditions. Therefore, air quality is the only environmental impact area potentially implicated by the proposed changes. With the exception of changes to startup and combustor tuning emission conditions, as described in Section 4.3 above, no change in emissions limits have been made by the SDAPCD or are proposed in this amendment petition. As noted in the Introduction to this petition, the changes increase the stringency of overall conditions/emission limits applicable to startup.

6.0 COMPLIANCE WITH LAWS, ORDINANCES, REGULATIONS AND STANDARDS (Sec. 1769(a)(1)(F))

The proposed amendments are not anticipated to impact SDG&E's ability to comply with the applicable LORS, as listed in Appendix A of the Commission Final Decision for the PEC. Revising the conditions of certification will be consistent with the final PTO dated August 2012 and continues to comply with its rules and regulations. The proposed changes improve operational efficiency and administration of the conditions previously analyzed by the SDAPCD in its original FDOC. They do not result in increased emissions or new emission sources.

7.0 POTENTIAL EFFECTS ON PUBLIC AND NEARBY PROPERTY OWNERS (Sec. 1769(a)(1)(G and I))

The requested amendments will not have any environmental impacts and will comply with all applicable LORS. Thus, the proposed changes will not affect nearby property owners or parties in the application proceedings or the public.

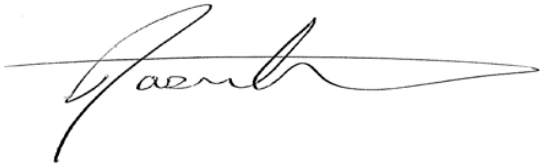
8.0 LIST OF PROPERTY OWNERS (Sec. 1769(a)(1)(H))

A list of property owners 1,000 feet of the plant site has previously been provided to the Commission Compliance Program Manager (CPM).

9.0 SUMMARY OF REQUEST

As demonstrated above, upgrading the CCGT's AGP technology and amending specific AQ conditions will not affect compliance with applicable LORS. Accordingly, SDG&E requests Commission approval of the proposed AGP technology upgrade and modified conditions in accordance with Title 20 CCR Section 1769.

Respectfully Submitted,



Jason T. Dobbs
Compliance Administrator
San Diego Gas & Electric

Dated: February 22, 2013

APPENDIX 1

SAN DIEGO AIR POLLUTION CONTROL DISTRICT
REVISED PERMIT TO OPERATE

COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
(858) 586-2600 FAX (858) 586-2601
www.sdapcd.org

PERMIT ID
APCD2010-PTO-000623

Sectors: 2, D
Site ID: APCD2001-SITE-04276
App ID: APCD2011-APP-001575

San Diego Gas & Electric
Environmental Operations
8315 Century Park CT CP 21J
San Diego CA 92123

EQUIPMENT ADDRESS
San Diego Gas & Electric - Palomar
Energy Center
2300 Harveson Pl
Escondido CA 92029

PERMIT TO OPERATE

EXPIRES: August 31, 2013

This permit is not valid until required fees have been paid.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT DESCRIPTION

Power Station Unit No.1 (West or Unit No.1) consiting of: one 165 MW rated natural-gas fired combined-cycle General Electric Power Systems Frame 7FA gas turbine generator (combustion turbine), S/N 298258, with dry low-NOx combustors, a heat recovery steam generator, a 195 MMbtu/hr (HHV) auxillary duct burner, a Peerless Selective Catalytic Reduction unit (SCR) [with a Cormetech catalyst block, a Peerless Ammonia Vaporizer Skid], an Engelhart oxydation catalyst, a steam turbine generator shared with Power Station Unit No. 2, and an Opflex system low load emission reduction.

Centralized chiller plant of 9800 ton refrigeration capacity or less, potentially including a thermal energy storage tank (3 to 5 million gallons), fixed and variable speed pumps and four (4) York chillers, Model YKZ1Z3J7-DHF, S/N's SATM-7832-20, SATM-7834-20, SATM-7920-40 and SATM-9722-70.

A shared 130,000 gallons per minute (GPM) wet cooling tower system and high efficiency drift eliminators.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [92F] NOx and CO Source Test
1 [20F] Non- Aircraft Turbine Engine
1 [92I] Ammonia Source Test
1 [92A] Particulate Matter Source Test

BEC: APCD2010-CON-000161

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

1. This equipment shall be properly maintained and kept in good operating condition at all times.
2. The unit shall be fired on Public Utility Commission (PUC) quality natural gas only. The permittee shall maintain quarterly records of sulfur content (grains/100 dscf) and higher and lower heating values (Btu/dscf) of the natural gas and provide such records to the District personnel upon request.
3. The permittee shall comply with all the applicable provisions of 40 CFR 73, including requirements to offset,

hold and retire SO2 allowances.

4. For purposes of determining compliance based on source testing, the average of three subtests shall be used. For purposes of determining compliance with emission limits based on the CEMS, data collected in accordance with the CEMS protocol shall be used and averaging periods shall be as specified herein.

5. When the unit is combusting fuel (operating), the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. The following averaging periods shall apply to CEMS data:

   A. During any clock hour when duct firing above 19.5 MMBTU/hr heat input is occurring (a "duct-fired hour"): 3-clock hour average, calculated as the average of the duct fired hour, the clock hour immediately prior to and the clock hour immediately following the duct-fired hour.
   B. For any clock hour during which the change in gross electrical output produced by the combustion turbine exceeds 50 MW per minute for one minute or longer (transient hour): 3-clock hour average, calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.
   C. All other hours: 1-clock-hour average. (NSR)

6. When the unit is operating, the concentration of CO measured in the exhaust stack shall not exceed 4.0 ppmvd corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock hour averaging period shall apply to CEMS data. (NSR)

7. When the unit is operating, the VOC concentration, calculated as methane and measured in the exhaust stack, shall not exceed 2.0 ppmvd corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. For purposes of determining compliance based on the CEMS, the District approved VOC/CO surrogate relationship, the CO CEMS data, and a 3-clock hour average shall be used in accordance with the CEMS protocol. The VOC/CO surrogate relationship shall be verified and/or modified, if necessary, based on source testing. (NSR)

8. When the unit is operating, the Ammonia concentration (Ammonia slip) measured in the exhaust stack, shall not exceed 5.0 ppmvd corrected to 15% oxygen, except during periods of startup, low load, or tuning.

9. When the unit is operating, the concentration of Oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 11.8 ppmvd corrected to 15% oxygen, averaged over each clock hour period, except for exempt periods of operation during startup, combined-cycle gas turbine extended startup, shutdowns, and low load operation, as defined in Rule 69.3.1. All CEMS calculations and averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.1(d)(1)]

10. When the unit is operating, the concentration of Oxides of Nitrogen (NOx), calculated as Nitrogen Dioxide (NO2) and measured in the exhaust stack, shall not exceed 42 ppmvd corrected to 15% oxygen, calculated over each clock hour period except for periods of Startup or Shutdown, as defined in Rule 69.3. All CEMS calculations, averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.]

11. The emissions of particulate matter less than 10 microns (PM-10) shall not exceed 14.0 lbs/hr for each unit with and without duct burner firing.

12. The discharge of particulate matter from the exhaust stack of the unit shall not exceed 0.10 grains per dry standard cubic foot (0.23 grams/dscm). The District may require periodic testing to verify compliance with this

PERMIT TO OPERATE

EXPIRES: August 31, 2013

standard. (Rule 53)

13. Visible emissions from the lube oil vents and the exhaust stack of the unit shall not exceed 20% opacity for more than three (3) minutes in any period of 60 consecutive minutes. (Rule 50)
14. When operating with the duct burner at or below 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following limits, except during periods of startup, shutdown, low load operation, or tuning. A 3 clock-hour averaging period for these limits shall apply to CEMS data except for NOx emissions during non-transient hours when a 1 clock-hour averaging period shall apply.

    Pollutant - Emission Limit, lbs/hr
    A) Oxides of Nitrogen, NOx (calculated as NO2) - 13.4
    B) Carbon Monoxide, CO - 16.3
    C) Volatile Organic Compounds, VOC - 4.0
15. When operating with the duct burner firing above 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following emission limits, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock-hour averaging period shall apply to CEMS data

    Pollutant - Emission Limit, lbs/hr
    A) Oxides of Nitrogen, NOx (calculated as NO2) - 14.9
    B) Carbon Monoxide, CO - 18.1
    C) Volatile Organic Compounds, VOC - 7.3
16. Total combined NOx emissions from both units shall not exceed 400 pounds per hour, calculated as Nitrogen Dioxide and measured over each 1-clock-hour period. These emission limits shall apply during all times during which one or both units are operating, including, but not limited to, emissions during periods of startup, shutdown, low load operation and tuning. In addition, Unit No. 1 shall not begin operating while Unit No. 2 is already operating in a startup period nor shall Unit No. 2 begin operating while Unit No. 1 is already operating in a startup period unless the unit already operating in a startup period meets all of the following in the clock-minute immediately preceding the clock-minute that the other unit begins operating:
    A) has been operating with a gross electrical output from the combustion turbine of 64 MW or more during the preceding 10 consecutive-clock-minute period;
    B) the concentration of NOx, calculated as NO2 and measured in the exhaust stack, does not exceed 2.0 ppmvd corrected to 15% oxygen; and
    C) the concentration of CO measured in the exhaust stack does not exceed 4.0 ppmvd corrected to 15% oxygen. (Rule 20.3(d)(2)(i))
17. Total combined CO emissions from both units shall not exceed 2,000 pounds per hour measured over each 1-clock-hour period. This emission limit shall apply during all times that one or both units are operating, including, but not limited to emissions during periods of startup, shutdown, low load operation and tuning. (Rule 20.3(d) (2)(i))
18. Total aggregate emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed 104.3 tons in each rolling 12-calendar month period. The total aggregate emissions of NOx shall include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.
19. Total aggregate emissions of Volatile Organic Compounds (VOC) from all stationary

emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed 50 tons in each rolling 12-calendar month period. The total aggregate emissions of VOC shall include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.

20. The permittee shall maintain records, on at least a calendar quarterly basis, of total aggregate mass emissions of NOx and VOC in tons from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), for each rolling 12-calendar month period. These records shall be made available for inspection within 30 calendar days after the end of each calendar quarter.
21. The emissions of any single Federal Hazardous Air Pollutant (HAP) shall not equal or exceed 10 tons, and the aggregate emissions of all Federal HAPs shall not equal or exceed 25 tons in any rolling 12-calendar month period. Compliance with these single and aggregate HAP limits shall be based on a methodology approved by the District for the purpose of calculating HAP emissions for this permit. If emissions exceed these limits, the permittee shall apply to amend permit to reflect applicable Federal Maximum Achievable Control Technology (MACT) standards and requirements in accordance with applicable provisions (including timing requirements) of 40 CFR Part 63.
22. The maximum total dissolved solids (TDS) concentration of the water used in the cooling towers shall not exceed 4,000 mg/l. This concentration shall be verified through quarterly testing of the water by a certified lab using EPA approved methods.
23. When combusting fuel, Ammonia shall be injected at all times that the SCR outlet temperature is 510 degrees Fahrenheit or greater.
24. The Ammonia injection flow rate shall be continuously measured, recorded and controlled. The Ammonia injection flow control equipment shall be installed, calibrated and maintained in accordance with a District approved protocol.
25. Except during periods when the Ammonia injection system is being tuned or one or more Ammonia injection systems is in manual control (for compliance with applicable permits), the automatic Ammonia injection system serving the SCR shall be in operation in accordance with manufacturer's specifications at all times when Ammonia is being injected into the SCR. Manufacturer specifications shall be maintained on site and made available to District personnel upon request.
26. The concentration of Ammonia solution used in the Ammonia injection system shall be less than 20% ammonia by weight. Records of Ammonia solution concentration shall be maintained on site and made available to District personnel upon request
27. For purposes of determining compliance with the emission limits of this permit, a shutdown period is the period of time that begins with the lowering of the gross electrical output of the combustion turbine below 64 MW and that ends five minutes after fuel flow to the combustion turbine ceases, not to exceed 65 consecutive minutes.
28. A startup period is the period of time that begins when fuel flows to the combustion turbine following a non-operational period. For purposes of determining compliance with the emission limits of this permit, the duration of a startup period shall not exceed 120 consecutive minutes if the steam turbine reheat bowl temperature is above 500° F when the startup period begins and shall not exceed 360 consecutive minutes if the steam turbine reheat bowl temperature is less than or equal to 500° F when the startup period begins.
29. Low load operation is a period of time that begins when the gross electrical output (load) of the combustion

turbine is reduced below 64 MW from a higher load and that ends 10 consecutive minutes after the combustion turbine load next exceeds 64 MW provided that fuel is continuously combusted during the entire period and one or more clock hour concentration emission limits specified in this permit are exceeded as a result of the low-load operation. Periods of operation at low load shall not exceed 130 minutes in any calendar day nor an aggregate of 780 minutes in any calendar year, and no period of operation at low load shall begin during a startup period.

30. Tuning is defined as adjustments to the combustion system that involves operating the unit in a manner such that the emissions control equipment may not be fully effective or operational. Only one combustion turbine will be tuned at any given time. Tuning events shall not exceed 480 minutes in a calendar day nor exceed 40 hours in a calendar year. The District compliance division shall be notified at least 24 hours in advance of any tuning event.

31. A CEMS Protocol is a document approved in writing by the APCD M&TS division that describes the Quality Assurance and Quality Control procedures for monitoring, calculating and recording stack emissions from the unit.

32. This unit shall be source tested to demonstrate compliance with the NOx, CO, VOC, PM-10, and Ammonia emission standards of this permit, using District approved methods. The source test and the NOx and CO Relative Accuracy Test Audit (RATA) tests shall be conducted in accordance with the applicable RATA frequency requirements of 40 CFR75, appendix B, sections 2.3.1 and 2.3.3.

33. A Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with applicable provisions of 40 CFR part 75 Appendix A and B performance specifications. At least 30 days prior to the test date, the permittee shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 21 days prior to the test so that observers may be present.

34. If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing. The source test protocol shall comply with the following requirements:

A. Measurements of NOX, CO, and O2 emissions shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and District Source Test, method 100, or alternative methods approved by the District and EPA.
B. Measurement of VOC emissions shall be conducted in accordance with EPA Methods 25A and/or 18, or alternative methods approved by the District and EPA.
C. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District ST-1B or an alternative method approved by the District and EPA.
D. Measurements of PM-10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA.
E. Source testing shall be performed with both the combustion turbine and the duct burner in operation. Each duct burner shall operate with a minimum heat input of 97 MMBTU/hr.
F. Source testing shall be performed at the most frequently used load level, as specified in 40 CFR Part 75 Appendix A Section 6.5.2.1.d, provided it is not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the district that the unit cannot operate under these conditions . If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous level power level.
G. Measurements of particulate matter emissions shall be conducted in accordance with SDAPCD Method 5

or an alternative method approved by the District and EPA.
H. Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method approved by the District and EPA.
I. Measurement of fuel flow shall be conducted in accordance with an approved test protocol.

35. Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the District for review and approval.

36. The District may require one or more of the following compounds, or additional compounds to be quantified through source testing periodically to ensure compliance with rule 1200:

A) Acetaldehyde
B) Acrolein
C) Benzene
D) Formaldehyde
E) Toluene
F) Xylenes

If the District requires the permittee to perform this source testing, the District shall request the testing in writing a reasonable period of time prior to the testing date, and the permittee shall submit a source test protocol to the District for written approval at least 30 days prior to the testing date.

37. The Oxides of Nitrogen (NOx) and Oxygen (O2) CEMs shall be certified and maintained in accordance with applicable federal regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75 and the CEMs protocol approved by the District. The Carbon Monoxide (CO) CEMs shall be certified and maintained in accordance with 40 CFR 60, Appendices B and F, unless otherwise specified in this permit.

38. Continuous emission monitoring system (CEMS) shall be installed and properly maintained and calibrated to measure, calculate and record the following, in accordance with the District approved CEMS protocol:

A. Hourly average concentration of Oxides of Nitrogen (NOX) corrected to 15% oxygen, in parts per million (ppmvd);
B. Concentration of Carbon Monoxide (CO) corrected to 15% oxygen, in parts per million (ppmvd);
C. Percent oxygen (O2) in the exhaust gas (%) for each clock hour period;
D. Average concentration of Oxides of Nitrogen (NOX) for each rolling 3-hour period, in parts per million (ppmv) corrected to 15% oxygen;
E. Hourly and Monthly mass emissions of Oxides of Nitrogen (NOX), in pounds;
F. Rolling 12 month mass emissions of Oxides of Nitrogen (NOX), in tons;
G. Hourly and monthly mass emissions of Carbon Monoxide (CO), in pounds;
H. Annual mass emissions of Carbon Monoxide (CO), in tons.
I. Natural gas flow rate to combustion turbine in scf/hr.
J. Natural gas flow rate to duct burner in scf/hr.
K. Concentration of Volatile Organic Compounds (VOC) corrected to 15% oxygen, in parts per million (pmvd) for each rolling 3-hour period, based upon the approved VOC/CO surrogate relationship.
M. Hourly and monthly mass emissions of VOC in pounds
N. Rolling 12-month mass emissions of VOC in tons.

COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
(858) 586-2600 FAX (858) 586-2601
www.sdapcd.org

Sectors: 2, D
Site ID: APCD2001-SITE-04276
App ID: APCD2011-APP-001575

PERMIT ID
APCD2010-PTO-000623

PERMIT TO OPERATE

EXPIRES: August 31, 2013

The CEMS shall be in operation in accordance with the District approved CEMS monitoring protocol at all times when the combustion turbine is in operation. A copy of the District approved CEMS monitoring protocol shall be maintained on site and made available to District personnel upon request.

39. When the CEMs is not recording data and the unit is operating, hourly NOx emissions annual calculations shall be determined in accordance with 40 CFR 75 Appendix C. Additionally, hourly CO emissions for the annual emission calculations shall be determined using the hourly emission rate recorded by the CEMs during the most recent hours in which the unit operated 3 continuous hours at no less than 80% of full power rating. Alternate CO emission factors shall be determined from compliance source test emissions data. The alternate hourly CO emission rate shall be reviewed and approved by the District, in writing.
40. Any violation of any emission standard as indicated by the CEMs shall be reported to the District's Compliance Division within 96 hours after such occurence.
41. The CEMs shall be maintained and operated, and reports submitted, in accordance with the requirements of Rule 19.2 sections (d), (e), (f)(2),(f)(3), (f)(4) and (f)(5) and CEMs protocol approved by the District.
42. The District shall be notified at least two weeks prior to any changes made in CEMS software that affect the measurement, calculation or correction of data displayed and/or recorded by the CEMS.
43. Fuel flowmeters with an accuracy of +/- 2% shall be maintained to measure the volumetric flow rate corrected for temperature and pressure. Correction factors and constants shall be maintained on site and made available to the District upon request. The fuel flowmeters shall meet the applicable quality assurance requirements of 40 CFR Part 75, Appendix D, and Section 2.1.6.
44. The unit shall be equipped with continuous monitors to measure, calculate and record the following operational characteristics:

    A. Ammonia injection rate in lb/hr of solution.
    B. Outlet temperature of SCR in degrees Fahrenheit.
    C. Combustion turbine power output (MW).
    D. Steam turbine reheat bowl temperature in degrees Fahrenheit.

    The monitors shall be installed, calibrated, and maintained in accordance with a protocol approved by the District, which shall include any relevant calculation methodologies. The monitors shall be in full operation at all times when the combustion turbine is in operation. Calibration records for the continuous monitors shall be maintained on site and made available to the District upon request.
45. Operating logs or Data Acquisition System (DAS) records shall be maintained to record the beginning and end times and durations of all startups, shutdowns, low load operations, and tuning periods to the nearest minute; quantity of fuel used (in each clock hour, calendar month, and 12 calendar month period) in standard cubic feet; hours of daily operation; and total cumulative hours of operation during each calendar year.
46. All records required by this written permit shall be maintained on site for a minimum of five years and made available to the District upon request. (Title V)
47. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.
48. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
49. The permittee shall, upon determination of applicability and written notification by the District, comply with all

COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
(858) 586-2600 FAX (858) 586-2601
www.sdapcd.org

Sectors: 2, D
Site ID: APCD2001-SITE-04276
App ID: APCD2011-APP-001575

PERMIT ID
APCD2010-PTO-000623

PERMIT TO OPERATE

EXPIRES: August 31, 2013

applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
(858) 586-2600 FAX (858) 586-2601
www.sdapcd.org

Sectors: 2, D
Site ID: APCD2001-SITE-04276
App ID: APCD2006-APP-984082

PERMIT ID
APCD2010-PTO-000625

San Diego Gas & Electric
Environmental Operations
8315 Century Park CT CP 21J
San Diego CA 92123

EQUIPMENT ADDRESS
San Diego Gas & Electric Palomar Energy Cntr
2300 Harveson Pl
Escondido CA 92029

PERMIT TO OPERATE

EXPIRES: August 31, 2013

This permit is not valid until required fees have been paid.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT DESCRIPTION

Power Station Unit No.2 (East or Unit No.2) consiting of: one 165 MW rated natural-gas fired combined-cycle General Electric Power Systems Frame 7FA gas turbine generator (combustion turbine), S/N 298257, with dry low-NOx combustors, a heat recovery steam generator, a 195 MMbtu/hr (HHV) auxillary duct burner, a Peerless Selective Catalytic Reduction unit (SCR) [with a Cormetech catalyst block, a Peerless Ammonia Vaporizer Skid], an Engelhart oxidation catalyst, a steam turbine generator shared with Power Station Unit No. 1, and an OpFlex low load emission software.
Centralized chiller plant of 9800 ton refrigeration capacity or less, potentially including a thermal energy storage tank (3 to 5 million gallons), fixed and variable speed pumps and four (4) York chillers, Model YKZ1Z3J7-DHF, S/N's SATM-7832-20, SATM-7834-20, SATM-7920-40 and SATM-9722-70.
A shared 130,000 gallons per minute (GPM) wet cooling tower system and high efficiency drift eliminators.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [92F] NOx and CO Source Test
1 [20F] Non- Aircraft Turbine Engine
1 [92I] Ammonia Source Test
1 [92A] Particulate Matter Source Test

BEC: APCD2010-CON-000161

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

1. This equipment shall be properly maintained and kept in good operating condition at all times.
2. The unit shall be fired on Public Utility Commission (PUC) quality natural gas only. The permittee shall maintain quarterly records of sulfur content (grains/100 dscf) and higher and lower heating values (Btu/dscf) of the natural gas and provide such records to the District personnel upon request.
3. The permittee shall comply with all the applicable provisions of 40 CFR 73, including requirements to offset, hold and retire SO2 allowances.
4. For purposes of determining compliance based on source testing, the average of three subtests shall be

used. For purposes of determining compliance with emission limits based on the CEMS, data collected in accordance with the CEMS protocol shall be used and averaging periods shall be as specified herein.

5. When the unit is combusting fuel (operating), the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. The following averaging periods shall apply to CEMS data:

   A. During any clock hour when duct firing above 19.5 MMBTU/hr heat input is occurring (a "duct-fired hour"): 3-clock hour average, calculated as the average of the duct fired hour, the clock hour immediately prior to and the clock hour immediately following the duct-fired hour.
   B. For any clock hour during which the change in gross electrical output produced by the combustion turbine exceeds 50 MW per minute for one minute or longer (transient hour): 3-clock hour average, calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.
   C. All other hours: 1-clock-hour average. (NSR)

6. When the unit is operating, the concentration of CO measured in the exhaust stack shall not exceed 4.0 ppmvd corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock hour averaging period shall apply to CEMS data. (NSR)

7. When the unit is operating, the VOC concentration, calculated as methane and measured in the exhaust stack, shall not exceed 2.0 ppmvd corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. For purposes of determining compliance based on the CEMS, the District approved VOC/CO surrogate relationship, the CO CEMS data, and a 3-clock hour average shall be used in accordance with the CEMS protocol. The VOC/CO surrogate relationship shall be verified and/or modified, if necessary, based on source testing. (NSR)

8. When the unit is operating, the Ammonia concentration (Ammonia slip) measured in the exhaust stack, shall not exceed 5.0 ppmvd corrected to 15% oxygen, except during periods of startup, low load, or tuning.

9. When the unit is operating, the concentration of Oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 11.8 ppmvd corrected to 15% oxygen, averaged over each clock hour period, except for exempt periods of operation during startup, combined-cycle gas turbine extended startup, shutdowns, and low load operation, as defined in Rule 69.3.1. All CEMS calculations and averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.1(d)(1)]

10. When the unit is operating, the concentration of Oxides of Nitrogen (NOx), calculated as Nitrogen Dioxide (NO2) and measured in the exhaust stack, shall not exceed 42 ppmvd corrected to 15% oxygen, calculated over each clock hour period except for periods of Startup or Shutdown, as defined in Rule 69.3. All CEMS calculations, averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.]

11. The emissions of particulate matter less than 10 microns (PM-10) shall not exceed 14.0 lbs/hr for each unit with and without duct burner firing.

12. The discharge of particulate matter from the exhaust stack of the unit shall not exceed 0.10 grains per dry standard cubic foot (0.23 grams/dscm). The District may require periodic testing to verify compliance with this standard. (Rule 53)

13. Visible emissions from the lube oil vents and the exhaust stack of the unit shall not exceed 20% opacity for

more than three (3) minutes in any period of 60 consecutive minutes. (Rule 50)

14. When operating with the duct burner at or below 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following limits, except during periods of startup, shutdown, low load operation, or tuning. A 3 clock-hour averaging period for these limits shall apply to CEMS data except for NOx emissions during non-transient hours when a 1 clock-hour averaging period shall apply.

    Pollutant - Emission Limit, lbs/hr
    A) Oxides of Nitrogen, NOx (calculated as NO2) - 13.4
    B) Carbon Monoxide, CO - 16.3
    C) Volatile Organic Compounds, VOC - 4.0

15. When operating with the duct burner firing above 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following emission limits, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock-hour averaging period shall apply to CEMS data

    Pollutant - Emission Limit, lbs/hr
    A) Oxides of Nitrogen, NOx (calculated as NO2) - 14.9
    B) Carbon Monoxide, CO - 18.1
    C) Volatile Organic Compounds, VOC - 7.3

16. Total combined NOx emissions from both units shall not exceed 400 pounds per hour, calculated as Nitrogen Dioxide and measured over each 1-clock-hour period. These emission limits shall apply during all times during which one or both units are operating, including, but not limited to, emissions during periods of startup, shutdown, low load operation and tuning. In addition, Unit No. 1 shall not begin operating while Unit No. 2 is already operating in a startup period nor shall Unit No. 2 begin operating while Unit No. 1 is already operating in a startup period unless the unit already operating in a startup period meets all of the following in the clock-minute immediately preceding the clock-minute that the other unit begins operating:
    A) has been operating with a gross electrical output from the combustion turbine of 64 MW or more during the preceding 10 consecutive-clock-minute period;
    B) the concentration of NOx, calculated as NO2 and measured in the exhaust stack, does not exceed 2.0 ppmvd corrected to 15% oxygen; and
    C) the concentration of CO measured in the exhaust stack does not exceed 4.0 ppmvd corrected to 15% oxygen. (Rule 20.3(d)(2)(i))

17. Total combined CO emissions from both units shall not exceed 2,000 pounds per hour measured over each 1-clock-hour period. This emission limit shall apply during all times that one or both units are operating, including, but not limited to emissions during periods of startup, shutdown, low load operation and tuning. (Rule 20.3(d) (2)(i))

18. Total aggregate emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed 104.3 tons in each rolling 12-calendar month period. The total aggregate emissions of NOx shall include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.

19. Total aggregate emissions of Volatile Organic Compounds (VOC) from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed 50 tons in each rolling 12-

PERMIT TO OPERATE

EXPIRES: August 31, 2013

calendar month period. The total aggregate emissions of VOC shall include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.

20. The permittee shall maintain records, on at least a calendar quarterly basis, of total aggregate mass emissions of NOx and VOC in tons from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), for each rolling 12-calendar month period. These records shall be made available for inspection within 30 calendar days after the end of each calendar quarter.
21. The emissions of any single Federal Hazardous Air Pollutant (HAP) shall not equal or exceed 10 tons, and the aggregate emissions of all Federal HAPs shall not equal or exceed 25 tons in any rolling 12-calendar month period. Compliance with these single and aggregate HAP limits shall be based on a methodology approved by the District for the purpose of calculating HAP emissions for this permit. If emissions exceed these limits, the permittee shall apply to amend permit to reflect applicable Federal Maximum Achievable Control Technology (MACT) standards and requirements in accordance with applicable provisions (including timing requirements) of 40 CFR Part 63.
22. The maximum total dissolved solids (TDS) concentration of the water used in the cooling towers shall not exceed 4,000 mg/l. This concentration shall be verified through quarterly testing of the water by a certified lab using EPA approved methods.
23. When combusting fuel, Ammonia shall be injected at all times that the SCR outlet temperature is 510 degrees Fahrenheit or greater.
24. The Ammonia injection flow rate shall be continuously measured, recorded and controlled. The Ammonia injection flow control equipment shall be installed, calibrated and maintained in accordance with a District approved protocol.
25. Except during periods when the Ammonia injection system is being tuned or one or more Ammonia injection systems is in manual control (for compliance with applicable permits), the automatic Ammonia injection system serving the SCR shall be in operation in accordance with manufacturer's specifications at all times when Ammonia is being injected into the SCR. Manufacturer specifications shall be maintained on site and made available to District personnel upon request.
26. The concentration of Ammonia solution used in the Ammonia injection system shall be less than 20% ammonia by weight. Records of Ammonia solution concentration shall be maintained on site and made available to District personnel upon request
27. For purposes of determining compliance with the emission limits of this permit, a shutdown period is the period of time that begins with the lowering of the gross electrical output of the combustion turbine below 64 MW and that ends five minutes after fuel flow to the combustion turbine ceases, not to exceed 65 consecutive minutes.
28. A startup period is the period of time that begins when fuel flows to the combustion turbine following a non-operational period. For purposes of determining compliance with the emission limits of this permit, the duration of a startup period shall not exceed 120 consecutive minutes if the steam turbine reheat bowl temperature is above 500° F when the startup period begins and shall not exceed 360 consecutive minutes if the steam turbine reheat bowl temperature is less than or equal to 500° F when the startup period begins.
29. Low load operation is a period of time that begins when the gross electrical output (load) of the combustion turbine is reduced below 64 MW from a higher load and that ends 10 consecutive minutes after the combustion turbine load next exceeds 64 MW provided that fuel is continuously combusted during the entire

period and one or more clock hour concentration emission limits specified in this permit are exceeded as a result of the low-load operation. Periods of operation at low load shall not exceed 130 minutes in any calendar day nor an aggregate of 780 minutes in any calendar year, and no period of operation at low load shall begin during a startup period.

30. Tuning is defined as adjustments to the combustion system that involves operating the unit in a manner such that the emissions control equipment may not be fully effective or operational. Only one combustion turbine will be tuned at any given time. Tuning events shall not exceed 480 minutes in a calendar day nor exceed 40 hours in a calendar year. The District compliance division shall be notified at least 24 hours in advance of any tuning event.
31. A CEMS Protocol is a document approved in writing by the APCD M&TS division that describes the Quality Assurance and Quality Control procedures for monitoring, calculating and recording stack emissions from the unit.
32. This unit shall be source tested to demonstrate compliance with the NOx, CO, VOC, PM-10, and Ammonia emission standards of this permit, using District approved methods. The source test and the NOx and CO Relative Accuracy Test Audit (RATA) tests shall be conducted in accordance with the applicable RATA frequency requirements of 40 CFR75, appendix B, sections 2.3.1 and 2.3.3.
33. A Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with applicable provisions of 40 CFR part 75 Appendix A and B performance specifications. At least 30 days prior to the test date, the permittee shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 21 days prior to the test so that observers may be present.
34. If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing. The source test protocol shall comply with the following requirements:

    A. Measurements of NOX, CO, and O2 emissions shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and District Source Test, method 100, or alternative methods approved by the District and EPA.
    B. Measurement of VOC emissions shall be conducted in accordance with EPA Methods 25A and/or 18, or alternative methods approved by the District and EPA.
    C. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District ST-1B or an alternative method approved by the District and EPA.
    D. Measurements of PM-10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA.
    E. Source testing shall be performed with both the combustion turbine and the duct burner in operation. Each duct burner shall operate with a minimum heat input of 97 MMBTU/hr.
    F. Source testing shall be performed at the most frequently used load level, as specified in 40 CFR Part 75 Appendix A Section 6.5.2.1.d, provided it is not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the district that the unit cannot operate under these conditions . If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous level power level.
    G. Measurements of particulate matter emissions shall be conducted in accordance with SDAPCD Method 5 or an alternative method approved by the District and EPA.
    H. Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method

approved by the District and EPA.
I. Measurement of fuel flow shall be conducted in accordance with an approved test protocol.

35. Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the District for review and approval.

36. The District may require one or more of the following compounds, or additional compounds to be quantified through source testing periodically to ensure compliance with rule 1200:

A) Acetaldehyde
B) Acrolein
C) Benzene
D) Formaldehyde
E) Toluene
F) Xylenes

If the District requires the permittee to perform this source testing, the District shall request the testing in writing a reasonable period of time prior to the testing date, and the permittee shall submit a source test protocol to the District for written approval at least 30 days prior to the testing date.

37. The Oxides of Nitrogen (NOx) and Oxygen (O2) CEMs shall be certified and maintained in accordance with applicable federal regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75 and the CEMs protocol approved by the District. The Carbon Monoxide (CO) CEMs shall be certified and maintained in accordance with 40 CFR 60, Appendices B and F, unless otherwise specified in this permit.

38. Continuous emission monitoring system (CEMS) shall be installed and properly maintained and calibrated to measure, calculate and record the following, in accordance with the District approved CEMS protocol:

A. Hourly average concentration of Oxides of Nitrogen (NOX) corrected to 15% oxygen, in parts per million (ppmvd);
B. Concentration of Carbon Monoxide (CO) corrected to 15% oxygen, in parts per million (ppmvd);
C. Percent oxygen (O2) in the exhaust gas (%) for each clock hour period;
D. Average concentration of Oxides of Nitrogen (NOX) for each rolling 3-hour period, in parts per million (ppmv) corrected to 15% oxygen;
E. Hourly and Monthly mass emissions of Oxides of Nitrogen (NOX), in pounds;
F. Rolling 12 month mass emissions of Oxides of Nitrogen (NOX), in tons;
G. Hourly and monthly mass emissions of Carbon Monoxide (CO), in pounds;
H. Annual mass emissions of Carbon Monoxide (CO), in tons.
I. Natural gas flow rate to combustion turbine in scf/hr.
J. Natural gas flow rate to duct burner in scf/hr.
K. Concentration of Volatile Organic Compounds (VOC) corrected to 15% oxygen, in parts per million (pmvd) for each rolling 3-hour period, based upon the approved VOC/CO surrogate relationship.
M. Hourly and monthly mass emissions of VOC in pounds
N. Rolling 12-month mass emissions of VOC in tons.

The CEMS shall be in operation in accordance with the District approved CEMS monitoring protocol at all times when the combustion turbine is in operation. A copy of the District approved CEMS monitoring

protocol shall be maintained on site and made available to District personnel upon request.

39. When the CEMs is not recording data and the unit is operating, hourly NOx emissions annual calculations shall be determined in accordance with 40 CFR 75 Appendix C. Additionally, hourly CO emissions for the annual emission calculations shall be determined using the hourly emission rate recorded by the CEMs during the most recent hours in which the unit operated 3 continuous hours at no less than 80% of full power rating. Alternate CO emission factors shall be determined from compliance source test emissions data. The alternate hourly CO emission rate shall be reviewed and approved by the District, in writing.
40. Any violation of any emission standard as indicated by the CEMs shall be reported to the District's Compliance Division within 96 hours after such occurence.
41. The CEMs shall be maintained and operated, and reports submitted, in accordance with the requirements of Rule 19.2 sections (d), (e), (f)(2),(f)(3), (f)(4) and (f)(5) and CEMs protocol approved by the District.
42. The District shall be notified at least two weeks prior to any changes made in CEMS software that affect the measurement, calculation or correction of data displayed and/or recorded by the CEMS.
43. Fuel flowmeters with an accuracy of +/- 2% shall be maintained to measure the volumetric flow rate corrected for temperature and pressure. Correction factors and constants shall be maintained on site and made available to the District upon request. The fuel flowmeters shall meet the applicable quality assurance requirements of 40 CFR Part 75, Appendix D, and Section 2.1.6.
44. The unit shall be equipped with continuous monitors to measure, calculate and record the following operational characteristics:

    A. Ammonia injection rate in lb/hr of solution.
    B. Outlet temperature of SCR in degrees Fahrenheit.
    C. Combustion turbine power output (MW).
    D. Steam turbine reheat bowl temperature in degrees Fahrenheit.

    The monitors shall be installed, calibrated, and maintained in accordance with a protocol approved by the District, which shall include any relevant calculation methodologies. The monitors shall be in full operation at all times when the combustion turbine is in operation. Calibration records for the continuous monitors shall be maintained on site and made available to the District upon request.
45. Operating logs or Data Acquisition System (DAS) records shall be maintained to record the beginning and end times and durations of all startups, shutdowns, low load operations, and tuning periods to the nearest minute; quantity of fuel used (in each clock hour, calendar month, and 12 calendar month period) in standard cubic feet; hours of daily operation; and total cumulative hours of operation during each calendar year.
46. All records required by this written permit shall be maintained on site for a minimum of five years and made available to the District upon request. (Title V)
47. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.
48. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
49. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

APPENDIX 2

SUGGESTED REVISED CONDITIONS OF CERTIFICATION

APPENDIX 2
SUGGESTED REVISED CONDITIONS OF CERTIFICATION

Conditions that have been replaced by the PTO wording and conditions with additions are shown in underline. Conditions that contain suggested deletions are shown in ~~strikethrough~~.

AQ-SC1 through **AQ-SC6 Obsolete**

AQ-SC7 The project owner shall submit Quarterly Operational Reports to the CPM and District that include operational and emissions information as necessary to demonstrate compliance with Conditions ~~AQ-SC8, AQ-SC9, and~~ AQ-1 through AQ-55, as applicable. The Quarterly Operational Report will specifically note or highlight instances of noncompliance and the corrective measures taken to correct these incidents. The CEMs shall be maintained and operated, and reports submitted, in accordance with the requirements of Rule 19.2 sections (d), (e), (f)(2), (f)(3), (f)(4) and (f)(5) and CEMs protocol approved by the District.

Verification: The project owner shall submit the quarterly reports to the CPM and the District no later than 30 days following the end of each calendar quarter as required by Rule 19.2 section (d).

AQ-SC8 through **AQ-SC9 Replaced by AQ-35**

AQ-SC10 Obsolete

AQ-SC11 ~~The emissions of ammonia (ammonia slip) from each gas turbine exhaust stack following the SCR controls shall not exceed 5.0 parts per million by volume on a dry basis (ppmvd) corrected to 15 percent oxygen. This emission limitation shall apply during "on-going" operations, except during transient hours. During transient hours, a limitation of 10.0 ppmvd corrected to 15 percent oxygen shall apply on a three-hour average calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.~~When the unit is operating, the ammonia concentration (ammonia slip) measured in the exhaust stack, shall not exceed 5.0 ppmvd corrected to 15% oxygen, except during periods of startup, low load, or tuning.

Verification: The project owner shall submit to the District and the CPM turbine initial source test data and annual source test data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-1 ~~The project owner shall operate the project in accordance with all data and specifications submitted with the application under which this license is issued unless otherwise noted below.~~**Replaced by AQ-52**

AQ-2 The project equipment shall be properly maintained and kept in good operating condition at all times.

Verification: The project owner shall certify that the equipment has been maintained and kept in good operating as part of the Quarterly Operational Report (AQ-SC7). The project owner shall make the site available for inspection by representatives of the District, CARB, and the Energy Commission.

AQ-3 The project owner shall provide access, facilities, utilities, and any necessary safety equipment for source testing and inspection upon request of the Air Pollution Control District.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, and the Energy Commission. The project owner shall provide access, facilities, utilities and necessary safety equipment for source testing available upon request to representatives of the District.

AQ-4 through **AQ-6 Obsolete**

AQ-7 The exhaust stacks for each turbine shall be equipped with source test ports and platforms to allow for the measurement and collection of stack gas samples consistent with all approved test protocols. The ports and platforms shall be constructed in accordance with District Method 3A, Figure 2, and approved by the District.

Verification: The project owner shall make the site available for inspection of the turbine stacks by representatives of the District, CARB, and the Energy Commission.

APPENDIX 2
Suggested Revised Conditions of Certification (Continued)

AQ-8 ~~This equipment shall be fired on natural gas only. The sulfur content of the natural gas used shall not exceed 0.75 grains per 100 standard cubic feet of natural gas. The project owner shall maintain quarterly records of fuel content (grains of sulfur compounds per 100scf of natural gas) and higher heating value (BTU/scf) and shall make these records available to District personnel upon request. Specifications, including sulfur content and higher heating value, of all natural gas, other than Public Utility Commission regulated natural gas, shall be submitted to the District for written approval prior to use.~~ The unit shall be fired on Public Utility Commission (PUC) quality natural gas only. The permittee shall maintain quarterly records of sulfur content (grains/100 dscf) and higher and lower heating values (Btu/dscf) of the natural gas and provide such records to the District personnel upon request.

Verification: The project owner shall make the fuel sulfur content data available for inspection by representatives of the District, CARB, and the Energy Commission.

AQ-9 ~~A Continuous Emission Monitoring System (CEMS) shall be installed and calibrated to measure and record the concentration of NOx, CO, and O2 in the exhaust gas on a dry basis (ppmvd). Upon initial startup, a properly installed and calibrated CEMS shall thereafter be in full operation at all times when the turbine is in operation. If needed prior to installation and approval of the permanent CEMS, a portable CEMS which has been properly calibrated, may be used to continuously measure and record these parameters. Within 90 days after the commencement of commercial operations (as defined by 40CFR 72.2), the CEMS shall be certified. Initial startup shall be defined as the time when fuel is first fired in the equipment and shall not include the purging of foreign material from inside of the steam paths and from the outside of the tubes also known as steam blow/boil out. Commercial operation is defined for this condition as the instance when power is sold to the grid.~~ Continuous emission monitoring system (CEMS) shall be installed and properly maintained and calibrated to measure, calculate and record the following, in accordance with the District approved CEMS protocol:

A. Hourly average concentration of oxides of nitrogen (NOX) corrected to 15% oxygen, in parts per million (ppmvd);

B. Concentration of carbon monoxide (CO) corrected to 15% oxygen, in parts per million (ppmvd);

C. Percent oxygen (O2) in the exhaust gas (%) for each clock hour period;

D. Average concentration of oxides of nitrogen (NOX) for each rolling 3-hour period, in parts per million (ppmv) corrected to 15% oxygen;

E. Hourly and Monthly mass emissions of oxides of nitrogen (NOX), in pounds;

F. Rolling 12 month mass emissions of oxides of nitrogen (NOX), in tons;

G. Hourly and monthly mass emissions of carbon monoxide (CO), in pounds;

H. Annual mass emissions of carbon monoxide (CO), in tons.

I. Natural gas flow rate to combustion turbine in scf/hr.

J. Natural gas flow rate to duct burner in scf/hr.

K. Concentration of Volatile Organic Compounds (VOC) corrected to 15% oxygen, in parts per million (pmvd) for each rolling 3-hour period, based upon the approved VOC/CO surrogate relationship.

L. Hourly and monthly mass emissions of VOC in pounds

M. Rolling 12-month mass emissions of VOC in tons.

The CEMS shall be in operation in accordance with the District approved CEMS monitoring protocol at all times when the combustion turbine is in operation. A copy of the District approved CEMS monitoring protocol shall be maintained on site and made available to District personnel upon request.

Verification: The project owner shall provide the information necessary for compliance with this condition in the permanent CEMS protocol required under Condition AQ-13.

AQ-10 and **AQ-11** **Obsolete**

APPENDIX 2
Suggested Revised Conditions of Certification (Continued)

AQ-12 ~~Prior to initial startup, each turbine shall be equipped with continuous monitors to measure or calculate and record the following operational characteristics of each unit:~~

- ~~natural gas flow rate (scfh);~~
- ~~natural gas flow rate to duct burners (scfh);~~
- ~~heat input rate (MMBtu /hr);~~
- ~~exhaust gas flow rate (dscfm);~~
- ~~exhaust gas temperature (ºF); and~~
- ~~power output (gross MW).~~

~~Protocol: The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. This protocol, which shall include calculation methodology, shall be submitted to the District for written approval. The monitors shall be in full operation at all times when the turbine is in operation.~~ Fuel flowmeters with an accuracy of +/- 2% shall be maintained to measure the volumetric flow rate corrected for temperature and pressure. Correction factors and constants shall be maintained on site and made available to the District upon request. The fuel flowmeters shall meet the applicable quality assurance requirements of 40 CFR Part 75, Appendix D, and Section 2.1.6.

Verification: The project owner shall make the meter information available for inspection by representatives of the District, CARB, and the Energy Commission.

AQ-13 ~~All CEMS shall be certified, calibrated, maintained, and operated for the monitoring of The NOx and CO~~ The oxides of nitrogen (NOx) and oxygen (O_2) CEMs shall be certified and maintained in accordance with the applicable regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR 75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75, and a CEMS protocol approved by the District. ~~The project owner shall submit a CEMS operating protocol to the District for written approval.~~ The carbon monoxide (CO) CEMs shall be certified and maintained in accordance with 40 CFR 60, Appendices B and F, unless otherwise specified in this permit.

Verification: The project owner shall make the site available for inspection of the CEMS and CEMS maintenance records by representatives of the District, CARB, and the Energy Commission.

AQ-14 The District shall be notified ~~in writing~~ at least two weeks prior to any ~~proposed~~ changes ~~to be~~ made in ~~any~~ Continuous Emission Monitor (CEM) software ~~which~~that affect the ~~value of data displayed on the CEM monitors and recorded for reporting with respect to the parameters measured by their respective sensing devices~~ measurement, calculation or correction of data displayed and/or recorded by the CEMS.

Verification: The project owner shall provide the District and the CPM copies of any proposed CEMS software change correspondence at least two weeks prior to any proposed changes.

AQ-15 A monitoring plan in conformance with 40 CFR 75.53 shall be submitted to U.S. EPA Region 9 and the District at least ~~45~~ 30 days prior to the Relative Accuracy Test Audit test, as required in 40 CFR 75.62.

Verification: The project owner shall notify the CPM of the submittal of the monitoring plan required under this condition within 15 days of its submittal to the District. The project owner shall provide the CPM documentation of the District approval of the monitoring plan required under this condition within 15 days of its receipt.

AQ-16 ~~No later than 90 days after each unit commences commercial operation (defined for this condition as the instance when power is sold to the grid), a Relative Accuracy Test Audit (RATA) and other required certification tests shall be performed and completed on the CEMS in accordance with 40 CFR Part 75 Appendix A Specifications and Test Procedures. At least 60 days prior to the test date, the project owner shall submit a test protocol to the District for written approval. Additionally, the District shall be notified a minimum of 45 days prior to the test so that observers may be present.~~ The source test and the NOx and CO Relative Accuracy Test Audit (RATA) tests shall be conducted in accordance with the applicable RATA frequency requirements of 40 CFR75, appendix B, sections 2.3.1 and 2.3.3. Within 45 ~~30~~ days of completion of this test, a written test report shall be submitted to the District for approval.

Verification: The project owner shall notify the CPM of the submittal of the RATA test protocol and the RATA test report within 15 days of its submittal to the District. The project owner shall notify the CPM and the District of the

RATA test date at least 30 days prior to the conducting the RATA test. The project owner shall provide the CPM documentation of the District approval of the RATA test protocol and RATA test report within 15 days of its receipt.

AQ-17 ~~The total aggregate emissions of oxides of nitrogen (NOx),calculated as nitrogen dioxide, from all emission units at this stationary source shall not exceed 104.3 tons for each rolling 12-calendar month period. Upon surrender of sufficient emission offsets in compliance with District Rules 20.1 and 20.3, the total aggregate NOx limit shall increase up to 124.4 tons for each rolling 12-calendar month period. These additional emission offsets must have been publicly noticed through the emission reduction credit banking process or District notification specific for this project, and in a California Energy Commission notification specific for this project. Aggregate emissions shall begin accruing at the initial startup of either turbine. Compliance with the aggregate NOx limit shall be verified using the CEMS on each gas turbine as well as U.S. EPA- or CARB certified NOx emission factors, testing results, or other representative emissions information for all other combustion equipment.~~ Total aggregate emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1(d)(1), shall not exceed 104.3 tons in each rolling 12-calendar month period. The total aggregate emissions of NOx shall include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.

Verification: The project owner shall submit to the CPM and the District turbine emissions CEMS data and calculations demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-18 The total aggregate emissions of Volatile Organic Compounds(VOC) from all emission units at this stationary source shall not exceed 50 tons for each rolling 12-calendar month period. The VOC emissions shall begin accruing at the initial startup of either turbine. Compliance with this limit shall be based on District-approved source testing and the District-approved CO/VOC surrogate relationship.

Verification: The project owner shall submit to the CPM and the District turbine emissions CEMS data and calculations demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-19 ~~The project owner shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NOx and VOC, in tons per rolling 12-calendar month period, from all equipment, excluding permit exempt equipment, at this stationary source for the previous 12-month period. These records shall be maintained on site for a minimum of five years and made available to the District upon request.~~The permittee shall maintain records, on at least a calendar quarterly basis, of total aggregate mass emissions of NOx and VOC in tons from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), for each rolling 12-calendar month period. These records shall be made available for inspection within 30 calendar days after the end of each calendar quarter.

Verification: The project owner shall make the site available for inspection of the NOx and VOC emissions records by representatives of the District, CARB, and the Energy Commission.

AQ-20 ~~To ensure compliance with District Rule 69.3.1 and except during any period of time for which a variance from Rule 69.3.1 has been granted by the Air Pollution Control District Hearing Board, when operating with post-combustion air pollution control equipment, emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from each turbine shall not exceed 11.8 parts per million by volume on a dry basis (ppmvd) calculated over each one-hour averaging period and corrected to 15 percent oxygen, excluding shutdowns, and extended and regular startups.~~ When the unit is operating, the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 11.8 ppmvd corrected to 15% oxygen, averaged over each clock hour period, except for exempt periods of operation during startup, combined-cycle gas turbine extended startup, shutdowns, and low load operation, as defined in Rule 69.3.1. All CEMS calculations and averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.1(d)(1)]

Verification: The project owner shall submit to the CPM and the District turbine CEMS emissions data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-21 Replaced by AQ-24

AQ-22 Replaced by AQ-26

AQ-23 Obsolete

APPENDIX 2
Suggested Revised Conditions of Certification (Continued)

AQ-24 ~~During the Commissioning Period when operating without any post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 900 pounds per hour of oxides of nitrogen (NOx), calculated as nitrogen dioxide and measured over each clock hour period. Additionally, when operating without any post-combustion air pollution control equipment, the total emissions when only one turbine is in operation shall not exceed 450 pounds per hour of NOx, calculated as nitrogen dioxide and measured over each clock hour period. These emission limits shall apply during commissioning, shutdowns, transients, and extended and regular startups to comply with District Rule 20.3(d)(2)(i).~~ Total combined NOx emissions from both units shall not exceed 400 pounds per hour, calculated as nitrogen dioxide and measured over each 1-clock-hour period. These emission limits shall apply during all times during which one or both units are operating, including, but not limited to, emissions during periods of startup, shutdown, low load operation and tuning. In addition, Unit No. 1 shall not begin operating while Unit No. 2 is already operating in a startup period nor shall Unit No. 2 begin operating while Unit No. 1 is already operating in a startup period unless the unit already operating in a startup period meets all of the following in the clock-minute immediately preceding the clock-minute that the other unit begins operating:

(A) has been operating with a gross electrical output from the combustion turbine of 64 MW or more during the preceding 10 consecutive-clock-minute period;

(B) the concentration of NOx, calculated as NO_2 and measured in the exhaust stack, does not exceed 2.0 ppmvd corrected to 15% oxygen; and

(C) the concentration of CO measured in the exhaust stack does not exceed 4.0 ppmvd corrected to 15% oxygen. (Rule 20.3(d)(2)(i))

Verification: The project owner shall submit to the CPM and the District turbine CEMS emissions data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-25 ~~Within 120 days or 300 hours of gas turbine operation, whichever comes first, after initial startup of each turbine, the project owner shall install post-combustion air pollution control equipment to minimize emissions from this equipment. Once installed, the post-combustion air pollution control equipment shall be maintained in good condition and, with the exception of periods during startup and shutdown, shall be in full operation at all times when the turbine is in stable operation.~~Except during periods when the ammonia injection system is being tuned or one or more ammonia injection systems is in manual control (for compliance with applicable permits), the automatic ammonia injection system serving the SCR shall be in operation in accordance with manufacturer's specifications at all times when ammonia is being injected into the SCR. Manufacturer specifications shall be maintained on site and made available to District personnel upon request.

Verification: The project owner shall make the meter information available for inspection by representatives of the District, CARB, and the Energy Commission.

AQ-26 ~~During the Commissioning Period when operating without any post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 4,000 pounds per hour of carbon monoxide (CO), measured over each clock hour period. Additionally, when operating without any post-combustion air pollution control equipment, the total emissions when one turbine is in operation shall not exceed 2,000 pounds per hour of CO measured over each clock hour period. These emission limits shall apply during commissioning, shutdowns, transients, and extended and regular startups to comply with District Rule 20.3(d)(2)(i).~~ Total combined CO emissions from both units shall not exceed 2,000 pounds per hour measured over each 1-clock-hour period. This emission limit shall apply during all times that one or both units are operating, including, but not limited to emissions during periods of startup, shutdown, low load operation and tuning. (Rule 20.3(d) (2)(i))

Verification: The project owner shall submit to the CPM and the District turbine CEMS emissions data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-27 Replaced by AQ-20

AQ-28 Obsolete

AQ-29 ~~Before operating an SCR system, continuous monitors shall be installed on each SCR system to monitor or calculate, and record the following:~~

- ~~ammonia injection rate (lbs/hr)~~
- ~~SCR catalyst temperature (ºF)~~

~~The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. This protocol, which shall include the calculation methodology, shall be submitted to the District for written approval at least 60 days~~

~~prior to initial startup of the gas turbines with the SCR system. The monitors shall be in full operation at all times when the turbine is in operation.~~ The unit shall be equipped with continuous monitors to measure, calculate and record the following operational characteristics:

A. Ammonia injection rate in lb/hr of solution.

B. Outlet temperature of SCR in degrees Fahrenheit.

C. Combustion turbine power output (MW).

D. Steam turbine reheat bowl temperature in degrees Fahrenheit.

The monitors shall be installed, calibrated, and maintained in accordance with a protocol approved by the District, which shall include any relevant calculation methodologies. The monitors shall be in full operation at all times when the combustion turbine is in operation. Calibration records for the continuous monitors shall be maintained on site and made available to the District upon request.

Verification: The project owner shall submit to the CPM and the District turbine CEMS emissions data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-30 Obsolete

AQ-31 Emissions of oxides of nitrogen (NOx) from each gas turbine/heat recovery steam generator train, as measured at the exhaust stack exit, calculated as nitrogen dioxide**, shall not exceed 2.0 parts per million** by volume on a dry basis (ppmvd) corrected to 15 percent oxygen, except during periods of startup, shutdown, low load operation, or tuning. In determining compliance with this emission limitation, the following averaging periods shall apply:

- During any clock hour when duct firing above 19.5 MMBTU/hr heat input is occurring (a "duct-fired hour"): three-hour average, calculated as the average of the duct fired hour, the clock hour immediately prior to and the clock hour immediately following the duct-fired hour.
- During any clock hour when the change in gross electrical output produced by the combustion turbine exceeds 50 MW per minute for one minute or longer ~~difference between the maximum MW produced by the generator train and the minimum MW produced by the generator train exceeds + 25 MW~~ (a "transient hour"): three-hour average, calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.
- All other hours: one-clock hour average.

Compliance with this limit shall be based on CEMS data for each unit averaged over each averaging period, or portions thereof, as applicable, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified through an initial source test and at least annual source testing thereafter.

Verification: The project owner shall submit to the CPM and the District turbine CEMS emissions data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-32 The emissions of carbon monoxide (CO) from each turbine shall not exceed 4.0 parts per million by volume (three-hour rolling average)on a dry basis (ppmvd) corrected to 15 percent oxygen. Compliance with these limits shall be based on CEMS data for each unit and averaged over each rolling three-hour period or portion thereof, except during periods of startup, shutdown, low load operation, or tuning ~~excluding time when the equipment is operated under startup or shutdown conditions~~ and the time that the equipment is not in operation. Compliance with this limit shall also be verified through the source test under condition **AQ-16**~~an initial emission source test and at least annual source testing thereafter~~.

Verification: The project owner shall submit to the District and the CPM turbine CEMS emissions data, and annual source test data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-33 The emissions of volatile organic compounds (VOC) from each turbine, calculated as methane, shall not exceed 2.0 parts per million by volume (three-hour average) on a dry basis (ppmvd) corrected to15 percent oxygen. Compliance with this limit shall be based on District-approved source testing, the District-approved CO/VOC surrogate relationship, and on CO CEMS data for each unit, averaged over each rolling three-hour period or portion thereof, when using COCEMS data, except during periods of startup, shutdown, low load operation, or tuning ~~excluding time when the equipment is operated under startup or shutdown conditions~~ and time the equipment is not

in operation. The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on initial emissions source tests and the source test under condition **AQ-16**~~at least annual source testing thereafter~~.

Verification: The project owner shall submit to the District and the CPM turbine CEMS emissions data, and annual source test data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-34 Replaced by AQ-SC11

AQ-35 The maximum total dissolved solids (TDS) concentration of the ~~reclaimed~~ water ~~to be~~ used in the cooling towers shall not exceed 4,000 mg/l. This concentration shall be verified through quarterly testing of the ~~reclaimed~~ water by a certified lab using EPA approved methods.

Verification: The project owner shall submit to the District and the CPM the quarterly cooling tower total dissolved solids test results demonstrating compliance with this condition as part of the Quarterly Operational Report (AQSC7).

AQ-36 ~~When operating without the duct burner, the emissions from each turbine shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the CEMS and/or District approved emissions source testing. Compliance with the NOx limit shall be based on each rolling one-hour averaging period or portion thereof, and compliance with CO and VOC limits shall be based on each rolling three-hour averaging period or portion thereof.~~ When operating with the duct burner at or below 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following limits, except during periods of startup, shutdown, low load operation, or tuning. A 3 clock-hour averaging period for these limits shall apply to CEMS data except for NOx emissions during non-transient hours when a 1 clock-hour averaging period shall apply.

Pollutant	Emission Limit, lbs/hr
Oxides of Nitrogen, NOx (calculated as NO2)	13.4
Carbon Monoxide, CO	16.3
Volatile Organic Compounds, VOC	4.0

Verification: The project owner shall submit to the District and the CPM turbine CEMS emissions data and calculations demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-37 ~~When operating with the duct burner, the emissions from each turbine shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the Continuous Emissions Monitoring System (CEMS) and continuous monitors and /or District approved emissions source testing. Compliance with the NOx, CO, and VOC limits shall be based on each rolling three-hour averaging period.~~ When operating with the duct burner firing above 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following emission limits, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock-hour averaging period shall apply to CEMS data.

Pollutant	Emission Limit, lbs/hr
Oxides of Nitrogen, NOx (calculated as NO2)	14.9
Carbon Monoxide, CO	18.1
Volatile Organic Compounds, VOC	7.3

Verification: The project owner shall submit to the District and the CPM turbine CEMS emissions data and calculations demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

AQ-38 This maximum combined fuel input into the duct burners shall not exceed 780,000 MMBtu per rolling 12-calendar month period. The project owner shall maintain a log that contains, at a minimum, the dates, times, and duct burner fuel consumption when one or both turbines are operated with the duct burners in operation. These logs shall be maintained on site for a minimum of five years and made available to District personnel upon request.

Verification: The project owner shall submit to the District and the CPM duct burner fuel consumption data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

APPENDIX 2
Suggested Revised Conditions of Certification (Continued)

AQ-39 ~~Extended startup shall be defined as the time necessary to reach minimum operating conditions for the air pollution control equipment and to meet the emission limits specified in Conditions **AQ-31** and **AQ-32**, not to exceed four hours, after initial firing of the turbine following a shutdown period of greater than or equal to 48 hours.~~ A startup period is the period of time that begins when fuel flows to the combustion turbine following a non-operational period. For purposes of determining compliance with the emission limits of this permit, the duration of a startup period shall not exceed 120 consecutive minutes if the steam turbine reheat bowl temperature is above 500° F when the startup period begins and shall not exceed 360 consecutive minutes if the steam turbine reheat bowl temperature is less than or equal to 500° F when the startup period begins.

Verification: The project owner shall submit to the District and the CPM startup frequency and duration data as part of the Quarterly Operational Report (AQ-SC7).

AQ-40 Replaced by AQ-39

AQ-41 ~~Shutdown is defined as the period beginning with the lowering of the output of a gas turbine below 50 percent of its base capacity and below the minimum operating conditions for the air pollution control equipment, and ending when combustion has ceased.~~ For purposes of determining compliance with the emission limits of this permit, a shutdown period is the period of time that begins with the lowering of the gross electrical output of the combustion turbine below 64 MW and that ends five minutes after fuel flow to the combustion turbine ceases, not to exceed 65 consecutive minutes.

Verification: The project owner shall submit to the District and the CPM shutdown frequency and duration data as part of the Quarterly Operational Report (AQ-SC7).

AQ-42 The emissions of particulate matter less than 10 microns (PM10) shall not exceed 14.0 lbs/hr for each turbine with and without duct burner firing. ~~Compliance with this limit shall be based on an initial emissions source test and at least annual source testing thereafter.~~

Verification: Compliance with this limit shall be based on an initial emissions source test and renewal source testing thereafter.

AQ-43 through **AQ-45 Obsolete**

AQ-46 The District may require toxic air contaminant emissions to be quantified through source testing periodically as needed to ensure compliance with Rule 1200.

Verification: If the District requires the permittee to perform source testing, the project owner shall submit the proposed protocol for the source tests 30 days prior to the proposed source test date to both the District and CPM for approval.

AQ-47 ~~This equipment shall be source tested on at least an annual basis to show continued compliance with all applicable emissions limits, unless otherwise directed in writing by the District. An annual CEMS Relative Accuracy Test Audit (RATA), where required, may be used to fulfill the annual source testing requirement for NOx and CO. If the testing will be performed by someone other than the District, a source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test protocol shall comply with the same requirements as listed in Condition **AQ-43**. Within 60 days after completion of testing, a final test report shall be submitted to the District for review and approval.~~This unit shall be source tested to demonstrate compliance with the NOx, CO, VOC, PM-10, and Ammonia emission standards of this permit, using District approved methods. The source test and the NOx and CO Relative Accuracy Test Audit (RATA) tests shall be conducted in accordance with the applicable RATA frequency requirements of 40 CFR75, appendix B, sections 2.3.1 and 2.3.3.

Verification: Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the CPM and District for review and approval. If the source test is conducted by the District the project owner shall provide a copy of the source test results to the CPM for review within 15 days of their receipt from the District.

AQ-48 The emissions of any single federal hazardous air pollutant shall not equal or exceed 10 tons, and the aggregate emissions of all federal hazardous air pollutants, shall not equal or exceed 25 tons in any rolling 12-calendar month period. If emissions exceed these limits, the project owner shall apply to amend these limits and conduct a Maximum Achievable Control Technology (MACT) analysis in accordance with applicable federal U.S. EPA regulations. Compliance with this limit shall be based on District approved VOC/TAC and CO/VOC surrogate relationships and the result of District approved source testing.

Verification: The project owner shall provide hazardous air pollutant emissions calculations using the District/CPM approved CO/VOC and VOC/TAC surrogate relationships demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC7). If emissions exceed the limits specified in this condition the project owner shall apply to amend these limits and conduct a Maximum Achievable Control Technology (MACT) analysis in accordance with applicable federal U.S. EPA regulations.

AQ-49 Obsolete

AQ-50 Replaced by AQ-9

AQ-51 Replaced by AQ-9

AQ-52 All records required by these conditions~~Conditions **AQ-1** through **AQ-55**~~ shall be maintained on site for a minimum of five years and made available to the District upon request.

Verification: The project owner shall make all necessary records available for inspection by representatives of the District, CARB, and the Energy Commission upon request.

AQ-53 ~~Pursuant to 40 CFR 72.30(b)(2)(ii) of the Federal Acid Rain Program, the project owner shall submit an application for a Title IV Operating Permit at least 24 months prior to the initial startup of this equipment.~~ The permittee shall comply with all the applicable provisions of 40 CFR 73, including requirements to offset, hold and retire SO_2 allowances.

Verification: The project owner shall submit to the CPM a certification that the applicable provisions of 40 CFR 73 have been met and the project owner maintains the information necessary to demonstrate compliance with this condition.

AQ-54 The project owner shall comply with the continuous emission monitoring requirements of 40 CFR Part 75.

Verification: The project owner shall provide the District and the CPM with the information necessary to demonstrate compliance with this condition in the permanent CEMS protocol (AQ-13) and as part of the Quarterly Operational Reports (AQ-SC7).

AQ-55 Obsolete

Additional Conditions in turbine PTO(s) but not in CEC conditions

4-For purposes of determining compliance based on source testing, the average of three subtests shall be used. For purposes of determining compliance with emission limits based on the CEMS, data collected in accordance with the CEMS protocol shall be used and averaging periods shall be as specified herein.

Verification: The project owner shall submit to the District and CPM the test reports and RATA results to verify the emission results were recorded in accordance with this condition.

10-When the unit is operating, the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO_2) and measured in the exhaust stack, shall not exceed 42 ppmvd corrected to 15% oxygen, calculated over each clock hour period except for periods of Startup or Shutdown, as defined in Rule 69.3. All CEMS calculations, averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.]

Verification: The project owner shall certify compliance with this condition as part of the Quarterly Operational Report (AQ-SC7) and maintain information necessary to demonstrate compliance with this condition.

12-The discharge of particulate matter from the exhaust stack of the unit shall not exceed 0.10 grains per dry standard cubic foot (0.23 grams/dscm). The District may require periodic testing to verify compliance with this standard. (Rule 53)

Verification: Upon request of the District, the project owner shall conduct a source test for particulate matter and submit the results as part of the Quarterly Operational Report (AQ-SC7).

13-Visible emissions from the lube oil vents and the exhaust stack of the unit shall not exceed 20% opacity for more than three (3) minutes in any period of 60 consecutive minutes. (Rule 50)

APPENDIX 2
Suggested Revised Conditions of Certification (Continued)

Verification: The project owner shall submit to the District and the CPM certification of compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

23-When combusting fuel, ammonia shall be injected at all times that the SCR outlet temperature is 510 degrees Fahrenheit or greater.

Verification: The project owner shall submit to the District and the CPM certification of compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

24-The ammonia injection flow rate shall be continuously measured, recorded and controlled. The ammonia injection flow control equipment shall be installed, calibrated and maintained in accordance with a District approved protocol.

Verification: The project owner shall make the ammonia records available for inspection by representatives of the District, CARB, and the Energy Commission upon request.

26-The concentration of ammonia solution used in the ammonia injection system shall be less than 20% ammonia by weight. Records of ammonia solution concentration shall be maintained on site and made available to district personnel upon request.

Verification: The project owner shall make the ammonia records available for inspection by representatives of the District, CARB, and the Energy Commission upon request.

29-Low load operation is a period of time that begins when the gross electrical output (load) of the combustion turbine is reduced below 64 MW from a higher load and that ends 10 consecutive minutes after the combustion turbine load next exceeds 64 MW provided that fuel is continuously combusted during the entire period and one or more clock hour concentration emission limits specified in this permit are exceeded as a result of the low-load operation. Periods of operation at low load shall not exceed 130 minutes in any calendar day nor an aggregate of 780 minutes in any calendar year, and no period of operation at low load shall begin during a startup period.

Verification: The project owner shall submit to the District and the CPM certification of compliance with this condition as part of the Quarterly Operational Report (AQ-SC7).

30-Tuning is defined as adjustments to the combustion system that involves operating the unit in a manner such that the emissions control equipment may not be fully effective or operational. Only one combustion turbine will be tuned at any given time. Tuning events shall not exceed 480 minutes in a calendar day nor exceed 40 hours in a calendar year The District compliance division shall be notified at least 24 hours in advance of any tuning event.

Verification: The project owner shall submit to the District and the CPM tuning events and duration data as part of the Quarterly Operational Report (AQ-SC7).

31-A CEMS Protocol is a document approved in writing by the APCD M&TS division that describes the Quality Assurance and Quality Control procedures for monitoring, calculating and recording stack emissions from the unit.

Verification: The project owner shall make the CEMS approval available for inspection by representatives of the District, CARB, and the Energy Commission upon request.

34- If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing. The source test protocol shall comply with the following requirements:

A. Measurements of NOX, CO, and O2 emissions shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and district Source Test, method 100, or alternative methods approved by the District and EPA.

B. Measurement of VOC emissions shall be conducted in accordance with EPA Methods 25A and/or 18, or alternative methods approved by the District and EPA.

C. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District ST-1B or an alternative method approved by the District and EPA.

D. Measurements of PM-10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA.

APPENDIX 2
Suggested Revised Conditions of Certification (Continued)

E. Source testing shall be performed with both the combustion turbine and the duct burner in operation. Each duct burner shall operate with a minimum heat input of 97 MMBTU/hr.

F. Source testing shall be performed at the most frequently used load level, as specified in 40 CFR Part 75 Appendix A Section 6.5.2.1.d, provided it is not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the district that the unit cannot operate under these conditions. If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous level power level.

G. Measurements of particulate matter emissions shall be conducted in accordance with SDAPCD Method 5 or an alternative method approved by the District and EPA.

H. Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method approved by the District and EPA.

I. Measurement of fuel flow shall be conducted in accordance with an approved test protocol.

Verification: If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing.

35- Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the District for review and approval.

Verification: The project owner shall submit to the District and the CPM source test data or RATA within 45 days after completion of the renewal source test or RATA.

39-When the CEMs is not recording data and the unit is operating, hourly NOx emissions the emission calculations shall be determined in accordance with 40 CFR 75 Appendix C. Additionally, hourly CO emissions for the annual emission calculations shall be determined using the hourly emission rate recorded by the CEMs during the most recent hours in which the unit operated 3 continuous hours at no less than 80% of full power rating. Alternate CO emission factors shall be determined from compliance source test emissions data. The alternate hourly CO emission rate shall be reviewed and approved by the District, in writing.

Verification: The project owner shall verify that the emission data provided in the Quarterly Operational Report (AQ-SC7) is calculated as specified above and the project owner shall make the CEMS emission data available for inspection by representatives of the District, CARB, and the Energy Commission upon request.

45- Operating logs or Data Acquisition System (DAS) records shall be maintained to record the beginning and end times and durations of all startups, shutdowns, low load operations, and tuning periods to the nearest minute; quantity of fuel used (in each clock hour, calendar month, and 12 calendar month period) in standard cubic feet; hours of daily operation; and total cumulative hours of operation during each calendar year.

Verification: The project owner shall make the DAS records available for inspection by representatives of the District, CARB, and the Energy Commission.

49-The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

Verification: If the District requires the permittee to provide information, the project owner shall submit the required information to both the District and CPM for approval.

APPENDIX 3

SIDE-BY-SIDE COMPARISON OF COMMISSION'S AIR RELATED CONDITIONS WITH SDAPCD REVISED PTO CONDITIONS

APPENDIX 3
SIDE-BY-SIDE COMPARISON OF AIR RELATED CONDITIONS WITH SDAPCD PTO CONDITIONS IN FINAL DECISION

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-SC1 through **AQ-SC6** **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-SC1** through **AQ-SC6** **Obsolete**
AQ-SC7 The project owner shall submit Quarterly Operational Reports to the CPM and District that include operational and emissions information as necessary to demonstrate compliance with Conditions **AQ-SC8**, **AQ-SC9**, and **AQ-1** through **AQ-55**, as applicable. The Quarterly Operational Report will specifically note or highlight instances of noncompliance and the corrective measures taken to correct these incidents.	**41-**The CEMs shall be maintained and operated, and reports submitted, in accordance with the requirements of Rule 19.2 sections (d), (e), (f)(2), (f)(3), (f)(4) and (f)(5) and CEMs protocol approved by the District.	**Replace AQ-SC7 wording with PTO Condition 41** **Rationale:** Quarterly reports are required by SDAPCD Rule 19.2 (d). Compliance with Rule 19.2 is referenced in SDAPCD condition 41. In addition, reporting compliance status is addressed by Title V reporting.
AQ-SC8 The project owner shall provide a flow meter to determine the daily cooling tower circulating water flow and shall monitor and record the daily flow.	**Not in PTO**	**Delete AQ-SC8** **Replace by AQ-35** **Rationale:** Maximum flow was used in the initial compliance demonstration. Actual flow may be equal to or less than maximum and thus does not influence compliance. Compliance is assured by monitoring total dissolved solids and operating within the limit stated in AQ-35.
AQ-SC9 The cooling tower annual PM10 emissions shall be limited to 5.7 ton/year. The project owner shall estimate annual PM10 emissions from the cooling tower using the water quality testing data and recirculating water flow data collected on a quarterly basis (**AQ-SC8** and **AQ-35**). The water quality testing data shall show the total dissolved solids, the pH, and the ammonia concentration of the cooling water. The cooling tower shall be equipped with drift eliminators with an efficiency of 0.0005 percent.	**Not in PTO**	**Delete AQ-SC9** **Replace by AQ-35** **Rationale:** Maximum flow was used in the initial compliance demonstration. Actual flow may be equal to or less than maximum and thus does not influence compliance. Compliance is assured by monitoring total dissolved solids and operating within the limit stated in AQ-35.
AQ-SC10 **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-SC10** **Obsolete**
AQ-SC11 The emissions of ammonia (ammonia slip) from each gas turbine exhaust stack following the SCR controls shall not exceed 5.0 parts per million by volume on a dry basis (ppmvd) corrected to 15 percent oxygen. This emission limitation shall apply during "on-going" operations, except during transient hours. During transient hours, a limitation of 10.0 ppmvd corrected to 15 percent	**8-** When the unit is operating, the ammonia concentration (ammonia slip) measured in the exhaust stack, shall not exceed 5.0 ppmvd corrected to 15% oxygen, except during periods of startup, low load, or tuning.	**Replace AQ-SC11 wording with condition 8** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006. SDAPCD determined that emission limits do not apply during startup, low load or tuning, and issued a revised PTO. The change is requested for consistency with the

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
oxygen shall apply on a three-hour average calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.		latest PTO.
AQ-1 The project owner shall operate the project in accordance with all data and specifications submitted with the application under which this license is issued unless otherwise noted below.	**Not in PTO**	**Delete** **Replace by AQ-52** **Rationale: AQ-1** is too generalized to verify compliance. Required monitoring, reporting and recordkeeping are specified in other conditions. AQ-52 requires records to be retained for five years consistent with the Title V program.
AQ-2 The project equipment shall be properly maintained and kept in good operating condition at all times.	**1 -** This equipment [as described in the PTO intro] shall be properly maintained and kept in good operating condition at all times.	**No change**
AQ-3 The project owner shall provide access, facilities, utilities, and any necessary safety equipment for source testing and inspection upon request of the Air Pollution Control District.	**47-** Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.	**No change**
AQ-4 through **AQ-6** **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-4** through **AQ-6** **Obsolete**
AQ-7 The exhaust stacks for each turbine shall be equipped with source test ports and platforms to allow for the measurement and collection of stack gas samples consistent with all approved test protocols. The ports and platforms shall be constructed in accordance with District Method 3A, Figure 2, and approved by the District.	**47-** Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.	**No change**
AQ-8 This equipment shall be fired on natural gas only. The sulfur content of the natural gas used shall not exceed 0.75 grains per 100 standard cubic feet of natural gas. The project owner shall maintain quarterly records of fuel content (grains of sulfur compounds per 100scf of natural gas) and higher heating value (BTU/scf) and shall make these records available to District personnel upon request. Specifications, including sulfur content and higher heating value, of all natural gas, other than Public Utility	**2-** The unit shall be fired on Public Utility Commission (PUC) quality natural gas only. The permittee shall maintain quarterly records of sulfur content (grains/100 dscf) and higher and lower heating values (Btu/dscf) of the natural gas and provide such records to the District personnel upon request.	**Replace AQ-8 wording with condition 2** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006. SDAPCD determined that compliance can be maintained using PUC quality natural gas. Thus, SDAPCD eliminated the condition for 0.75 grains per 100 standard cubic feet in the revised PTO and instead refers to use of PUC quality natural gas only.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
Commission regulated natural gas, shall be submitted to the District for written approval prior to use.		
AQ-9 A Continuous Emission Monitoring System (CEMS) shall be installed and calibrated to measure and record the concentration of NOx, CO, and O_2 in the exhaust gas on a dry basis (ppmvd). Upon initial startup, a properly installed and calibrated CEMS shall thereafter be in full operation at all times when the turbine is in operation. If needed prior to installation and approval of the permanent CEMS, a portable CEMS which has been properly calibrated, may be used to continuously measure and record these parameters. Within 90 days after the commencement of commercial operations (as defined by 40CFR 72.2), the CEMS shall be certified. Initial startup shall be defined as the time when fuel is first fired in the equipment and shall not include the purging of foreign material from inside of the steam paths and from the outside of the tubes also known as steam blow/boil out. Commercial operation is defined for this condition as the instance when power is sold to the grid.	**38-** Continuous emission monitoring system (CEMS) shall be installed and properly maintained and calibrated to measure, calculate and record the following, in accordance with the District approved CEMS protocol: A. Hourly average concentration of oxides of nitrogen (NOX) corrected to 15% oxygen, in parts per million (ppmvd); B. Concentration of carbon monoxide (CO) corrected to 15% oxygen, in parts per million (ppmvd); C. Percent oxygen (O2) in the exhaust gas (%) for each clock hour period; D. Average concentration of oxides of nitrogen (NOX) for each rolling 3-hour period, in parts per million (ppmv) corrected to 15% oxygen; E. Hourly and Monthly mass emissions of oxides of nitrogen (NOX), in pounds; F. Rolling 12 month mass emissions of oxides of nitrogen (NOX), in tons; G. Hourly and monthly mass emissions of carbon monoxide (CO), in pounds; H. Annual mass emissions of carbon monoxide (CO), in tons. I. Natural gas flow rate to combustion turbine in scf/hr. J. Natural gas flow rate to duct burner in scf/hr. K. Concentration of Volatile Organic Compounds (VOC) corrected to 15% oxygen, in parts per million (pmvd) for each rolling 3-hour period, based upon the approved VOC/CO surrogate relationship. L. Hourly and monthly mass emissions of VOC in pounds M. Rolling 12-month mass emissions of VOC in tons.	**Replace by AQ-9 wording with condition 38** **Rationale:** The requirements of AQ-9, AQ-12 and AQ-29 are addressed in more detail in PTO conditions 38, 43 and 44. Both AQ-9 and AQ-12 require CEMS and an approved CEMS protocol for turbines, and AQ-9 contains obsolete references to startup and installation. As part of the August 2006 amendments to the Final Determination of Compliance, SDAPCD eliminated obsolete conditions. SDG&E respectfully requests AQ-9 to be the same as condition 38, AQ-12 the same as condition 43 and AQ-29 the same as condition 44. These changes will clarify current monitoring requirements and will provide consistency with the revised PTO.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
	The CEMS shall be in operation in accordance with the District approved CEMS monitoring protocol at all times when the combustion turbine is in operation. A copy of the District approved CEMS monitoring protocol shall be maintained on site and made available to District personnel upon request.	
AQ-10 and **AQ-11** **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-10** and **AQ-11**
AQ-12 Prior to initial startup, each turbine shall be equipped with continuous monitors to measure or calculate and record the following operational characteristics of each unit: • natural gas flow rate (scfh); • natural gas flow rate to duct burners (scfh); • heat input rate (MMBtu /hr); • exhaust gas flow rate (dscfm); • exhaust gas temperature (ºF); and • power output (gross MW). Protocol: The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. This protocol, which shall include calculation methodology, shall be submitted to the District for written approval. The monitors shall be in full operation at all times when the turbine is in operation.	**43-** Fuel flowmeters with an accuracy of +/- 2% shall be maintained to measure the volumetric flow rate corrected for temperature and pressure. Correction factors and constants shall be maintained on site and made available to the District upon request. The fuel flowmeters shall meet the applicable quality assurance requirements of 40 CFR Part 75, Appendix D, and Section 2.1.6.	**Replace AQ-12 wording with condition 43** **Rationale:** The requirements of AQ-9, AQ-12 and AQ-29 are addressed in more detail in PTO conditions 38, 43 and 44. Both AQ-9 and AQ-12 require CEMS and an approved CEMS protocol for turbines. SDG&E respectfully requests AQ-9 to be the same as condition 38, AQ-12 the same as condition 43 and AQ-29 the same as condition 44. These changes will clarify current monitoring requirements and will provide consistency with the revised PTO.
AQ-13 All CEMS shall be certified, calibrated, maintained, and operated for the monitoring of NOx and CO in accordance with the applicable regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR 75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75, and a CEMS protocol approved by the District. The project owner shall submit a CEMS operating protocol to the District for written approval.	**37-** The oxides of nitrogen (NOx) and oxygen (O2) CEMs shall be certified and maintained in accordance with applicable federal regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75 and the CEMs protocol approved by the District. The carbon monoxide (CO) CEMs shall be certified and maintained in accordance with 40 CFR 60, Appendices B and F, unless otherwise specified in this permit.	**Revise AQ-13 with wording from 37 for O2 and CO** **(see Appendix 2 for suggested wording)** **Rationale:** AQ-13 does not address O2 and is inconsistent with the CO requirements. AQ-13 should be consistent with the most recent PTO.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-14 The District shall be notified in writing prior to any proposed changes to be made in any Continuous Emission Monitor (CEM) software which affect the value of data displayed on the CEM monitors and recorded for reporting with respect to the parameters measured by their respective sensing devices.	**42 -** The District shall be notified at least two weeks prior to any changes made in CEMS software that affect the measurement, calculation or correction of data displayed and/or recorded by the CEMS.	**Revise AQ-14 with wording from 42** **(see Appendix 2 for suggested wording)** **Rationale:** This administrative change provides clarification of timing and compliance requirements, and consistency with the revised PTO.
AQ-15 A monitoring plan in conformance with 40 CFR 75.53 shall be submitted to U.S. EPA Region 9 and the District at least 45 days prior to the Relative Accuracy Test Audit test, as required in 40 CFR 75.62.	**33-** A Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with applicable provisions of 40CFR part 75 Appendix A and B performance specifications. At least 30 days prior to the test date, the permittee shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 21 days prior to the test so that observers may be present.	**Revise AQ-15 from 45 days to 30 days** **(see Appendix 2 for suggested wording)** **Rationale:** EPA changed the deadline from 45 to 21 days to synchronize the deadline with source test notices. CFR 75.62 says "The designated representative shall submit the required hardcopy information as follows: no later than 21 days prior to the initial certification test; with any certification or recertification application, if a hardcopy monitoring plan change is associated with the certification or recertification event; and within 30 days of any other event with which a hardcopy monitoring plan change is associated, pursuant to § 75.53(b)." Thus, 30 days is the most stringent deadline.
AQ-16 No later than 90 days after each unit commences commercial operation (defined for this condition as the instance when power is sold to the grid), a Relative Accuracy Test Audit (RATA) and other required certification tests shall be performed and completed on the CEMS in accordance with 40 CFR Part 75 Appendix A Specifications and Test Procedures. At least 60 days prior to the test date, the project owner shall submit a test protocol to the District for written approval. Additionally, the District shall be notified a minimum of 45 days prior to the test so that observers may be present. Within 30 days of completion of this test, a written test report shall be submitted to the District for approval.	**33-** A Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with applicable provisions of 40CFR part 75 Appendix A and B performance specifications. At least 30 days prior to the test date, the permittee shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 21 days prior to the test so that observers may be present.	**Replace AQ-16 wording with condition 33** **Rationale:** Commencing operation and initial testing is complete and thus obsolete. Notifications are addressed in AQ-15. 40 CFR Part 75.63 specifies 45 days to submit a report. AQ-16 is revised for consistency with this standard and the revised PTO.
AQ-17 The total aggregate emissions of oxides of nitrogen (NOx),calculated as nitrogen dioxide, from all emission units at this stationary source shall not exceed 104.3 tons for each rolling 12-calendar month period. Upon surrender of sufficient emission offsets in compliance with District Rules 20.1 and 20.3, the total aggregate NOx limit shall increase up to 124.4 tons for each rolling 12-calendar	**18-** Total aggregate emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1(d) (1), shall not exceed 104.3 tons in each rolling 12-calendar month period. The total aggregate emissions of NOx shall	**Replace AQ-17 wording with condition 18** **Rationale:** AQ-17 pre-dates startup of the equipment. The potential to emit was not increased. AQ-9, AQ-13 and other conditions specify compliance requirements for CEMS. Thus, AQ-17 requires revisions. The wording in condition 18 is suggested for the revised condition for

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
month period. These additional emission offsets must have been publicly noticed through the emission reduction credit banking process or District notification specific for this project, and in a California Energy Commission notification specific for this project. Aggregate emissions shall begin accruing at the initial startup of either turbine. Compliance with the aggregate NOx limit shall be verified using the CEMS on each gas turbine as well as U.S. EPA- or CARB certified NOx emission factors, testing results, or other representative emissions information for all other combustion equipment.	include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.	consistency with the latest PTO.
AQ-18 The total aggregate emissions of Volatile Organic Compounds(VOC) from all emission units at this stationary source shall not exceed 50 tons for each rolling 12-calendar month period. The VOC emissions shall begin accruing at the initial startup of either turbine. Compliance with this limit shall be based on District-approved source testing and the District-approved CO/VOC surrogate relationship.	**19-** Total aggregate emissions of Volatile Organic Compounds (VOC) from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed 50 tons in each rolling 12-calendar month period. The total aggregate emissions of VOC shall include emissions during all times that the equipment is operating including but not limited to, emissions during periods of startup, shutdown, low load operation and tuning.	**No change**
AQ-19 The project owner shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NOx and VOC, in tons per rolling 12-calendar month period, from all equipment, excluding permit exempt equipment, at this stationary source for the previous 12-month period. These records shall be maintained on site for a minimum of five years and made available to the District upon request.	**20-** The permittee shall maintain records, on at least a calendar quarterly basis, of total aggregate mass emissions of NOx and VOC in tons from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), for each rolling 12-calendar month period. These records shall be made available for inspection within 30 calendar days after the end of each calendar quarter.	**Replace AQ-19 wording with condition 20** **Rationale:** AQ-19 pre-dates startup of the equipment. SDAPCD changed the frequency of monitoring from a monthly to quarterly basis. The change is requested for consistency with the latest PTO.
AQ-20 To ensure compliance with District Rule 69.3.1 and except during any period of time for which a variance from Rule 69.3.1 has been granted by the Air Pollution Control District Hearing Board, when operating with post-combus-tion air pollution control equipment, emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from each turbine shall not exceed 11.8 parts per million by volume on a dry basis (ppmvd) calculated over each one-hour averaging period and corrected to 15 percent oxygen, excluding shutdowns, and extended and regular startups.	**9-** When the unit is operating, the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 11.8 ppmvd corrected to 15% oxygen, averaged over each clock hour period, except for exempt periods of operation during startup, combined-cycle gas turbine extended startup, shutdowns, and low load operation, as defined in Rule 69.3.1. All CEMS calculations and averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.1(d)(1)]	**Replace AQ-20 wording with condition 9** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006. SDAPCD determined that emission limits do not apply during low load operation and revised Rule 69.3.1 on February 24, 2010. SDAPCD issued a revised PTO. This change is requested for consistency with the revised rule and latest PTO.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-21 During shutdowns, and extended and regular startups, when operating with post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 200 pounds per hour of oxides of nitrogen (NOx), calculated as nitrogen dioxide and measured over each clock hour period. Additionally, when operating with post-combustion air pollution control equipment, the total emissions when only one turbine is in operation shall not exceed 100 pounds per hour of NOx, calculated as nitrogen dioxide and measured over each clock hour period. (To comply with District Rule 20.3 (d)(2)(I)).	**16-** Total combined NOx emissions from both units shall not exceed 400 pounds per hour, calculated as nitrogen dioxide and measured over each 1-clock-hour period. These emission limits shall apply during all times during which one or both units are operating, including, but not limited to, emissions during periods of startup, shutdown, low load operation and tuning. In addition, Unit No. 1 shall not begin operating while Unit No. 2 is already operating in a startup period nor shall Unit No. 2 begin operating while Unit No. 1 is already operating in a startup period unless the unit already operating in a startup period meets all of the following in the clock-minute immediately preceding the clock-minute that the other unit begins operating: (A) has been operating with a gross electrical output from the combustion turbine of 64 MW or more during the preceding 10 consecutive-clock-minute period; (B) the concentration of NOx, calculated as NO2 and measured in the exhaust stack, does not exceed 2.0 ppmvd corrected to 15% oxygen; and (C) the concentration of CO measured in the exhaust stack does not exceed 4.0 ppmvd corrected to 15% oxygen. (Rule 20.3(d)(2)(i))	**Delete AQ-21** **Replaced by AQ-24** **Rationale:** Both AQ-21 and AQ-24 are compared to condition 16. Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to obtain a single startup limit. With and without post-combustion controls phases are difficult to interpret for SCR systems; it is physically present but not fully effective until startup is complete. The line between with and without controls is a challenge for CEMS and emissions tracking. Startup may be described as without post combustion controls. SDAPCD deleted the "with post combustion control" startup limit and instead provided a single limit of 400 pounds per hour and added a condition to inject ammonia earlier to reduce startup emissions.
AQ-22 During extended startup and shutdown, when operating with post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 3,384 pounds per hour of carbon monoxide (CO), averaged over a one-hour averaging period. Additionally, when operating with post-combustion air pollution control equipment, the total emissions when one turbine is in operation shall not exceed 1,692 pounds per hour of CO over a one-hour averaging period. (To comply with District Rule 20.3 (d)(2)(i)).	**17-** Total combined CO emissions from both units shall not exceed 2,000 pounds per hour measured over each 1-clock-hour period. This emission limit shall apply during all times that one or both units are operating, including, but not limited to emissions during periods of startup, shutdown, low load operation and tuning. (Rule 20.3(d)(2)(i))	**Delete AQ-22** **Replaced by AQ-26** **Rationale:** Both AQ-22 and AQ-26 are compared to condition 17. Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to obtain a single startup limit. With and without post-combustion controls phases are difficult to interpret for CO catalyst; it is physically present but not fully effective until startup is complete. The line between with and without controls is a challenge for CEMS and emissions tracking. Startup may be described as without post combustion controls. SDAPCD deleted the "with post combustion control" startup limit and instead provided a single limit of 2,000 pounds per hour and added a condition to inject ammonia earlier to reduce startup emissions.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-23 **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-23** **Obsolete**
AQ-24 During the Commissioning Period when operating without any post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 900 pounds per hour of oxides of nitrogen (NOx), calculated as nitrogen dioxide and measured over each clock hour period. Additionally, when operating without any post-combustion air pollution control equipment, the total emissions when only one turbine is in operation shall not exceed 450 pounds per hour of NOx, calculated as nitrogen dioxide and measured over each clock hour period. These emission limits shall apply during commissioning, shutdowns, transients, and extended and regular startups to comply with District Rule 20.3(d)(2)(i).	**16-** Total combined NOx emissions from both units shall not exceed 400 pounds per hour, calculated as nitrogen dioxide and measured over each 1-clock-hour period. These emission limits shall apply during all times during which one or both units are operating, including, but not limited to, emissions during periods of startup, shutdown, low load operation and tuning. In addition, Unit No. 1 shall not begin operating while Unit No. 2 is already operating in a startup period nor shall Unit No. 2 begin operating while Unit No. 1 is already operating in a startup period unless the unit already operating in a startup period meets all of the following in the clock-minute immediately preceding the clock-minute that the other unit begins operating: (A) has been operating with a gross electrical output from the combustion turbine of 64 MW or more during the preceding 10 consecutive-clock-minute period; (B) the concentration of NOx, calculated as NO2 and measured in the exhaust stack, does not exceed 2.0 ppmvd corrected to 15% oxygen; and (C) the concentration of CO measured in the exhaust stack does not exceed 4.0 ppmvd corrected to 15% oxygen. (Rule 20.3(d)(2)(i))	**Replace AQ-24 wording with condition 16** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to obtain a single startup limit. The new limit is less than one half of the current "without post combustion controls" limit in the CEC conditions. SDAPCD deleted the "with post combustion control" startup limit and instead provided a single limit of 400 pounds per hour and added condition to inject ammonia earlier to reduce startup emissions.
AQ-25 Within 120 days or 300 hours of gas turbine operation, whichever comes first, after initial startup of each turbine, the project owner shall install post-combustion air pollution control equipment to minimize emissions from this equipment. Once installed, the post-combustion air pollution control equipment shall be maintained in good condition and, with the exception of periods during startup and shutdown, shall be in full operation at all times when the turbine is in stable operation.	**25**-Except during periods when the ammonia injection system is being tuned or one or more ammonia injection systems is in manual control (for compliance with applicable permits), the automatic ammonia injection system serving the SCR shall be in operation in accordance with manufacturer's specifications at all times when ammonia is being injected into the SCR. Manufacturer specifications shall be maintained on site and made available to District personnel upon request.	**Replace AQ-25 wording with condition 25** **Rationale:** AQ-25 contains obsolete references to initial startup and installation. As part of the August 2006 amendments to the Final Determination of Compliance, SDAPCD eliminated obsolete conditions. Condition 25 of the most recent PTO addresses the operating and maintenance requirements for control equipment. Therefore, AQ-25 should be replaced with the wording from condition 25 to identify the current requirements.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-26 During the Commissioning Period when operating without any post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 4,000 pounds per hour of carbon monoxide (CO), measured over each clock hour period. Additionally, when operating without any post-combustion air pollution control equipment, the total emissions when one turbine is in operation shall not exceed 2,000 pounds per hour of CO measured over each clock hour period. These emission limits shall apply during commissioning, shutdowns, transients, and extended and regular startups to comply with District Rule 20.3(d)(2)(i).	**17-** Total combined CO emissions from both units shall not exceed 2,000 pounds per hour measured over each 1-clock-hour period. This emission limit shall apply during all times that one or both units are operating, including, but not limited to emissions during periods of startup, shutdown, low load operation and tuning. (Rule 20.3(d)(2)(i))	**Replace AQ-26 wording with condition 17** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to obtain a single startup limit. The new limit is one half of the "without post combustion controls" startup limit in the CEC condition. SDAPCD deleted the "with post combustion control" startup limit and instead provided a single limit of 2,000 pounds per hour.
AQ-27 To ensure compliance with District Rule 69.3.1 and except during any period of time for which a variance from Rule 69.3.1 has been granted by the Air Pollution District Hearing Board, when operating without any post combustion air pollution control equipment, the emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, from each turbine shall not exceed 19.6 parts per million by volume on a dry basis (ppmvd) calculated over each one-hour averaging period and corrected to 15 percent oxygen, excluding shutdowns, regular and extended startups.	**9-** When the unit is operating, the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 11.8 ppmvd corrected to 15% oxygen, averaged over each clock hour period, except for exempt periods of operation during startup, combined-cycle gas turbine extended startup, shutdowns, and low load operation, as defined in Rule 69.3.1. All CEMS calculations and averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.1(d)(1)]	**Delete AQ-27** **Replaced by AQ-20 and condition 9** **Rationale:** Both AQ-20 and AQ-27 are compared to condition 9. Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to replace "with" and "without post-combustion" emissions limits with a single limit. In addition, SDAPCD determined that emission limits do not apply during low load operation and revised Rule 69.3.1 on February 24, 2010. SDAPCD issued a revised PTO. This change is requested for consistency with the revised rule and latest PTO.
AQ-28 **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-28** **Obsolete**
AQ-29 Before operating an SCR system, continuous monitors shall be installed on each SCR system to monitor or calculate, and record the following: • ammonia injection rate (lbs/hr) • SCR catalyst temperature (ºF) The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. This protocol, which shall include the calculation methodology, shall be submitted to the District for written approval at least 60 days prior to initial startup of the gas turbines with the SCR system. The monitors shall be in full operation at all times when the turbine is in operation.	**44-** The unit shall be equipped with continuous monitors to measure, calculate and record the following operational characteristics: A. Ammonia injection rate in lb/hr of solution. B. Outlet temperature of SCR in degrees Fahrenheit. C. Combustion turbine power output (MW). D. Steam turbine reheat bowl temperature in degrees Fahrenheit. The monitors shall be installed, calibrated, and maintained in accordance with a protocol approved by the District,	**Replace AQ-29 wording with condition 44** **Rationale:** The requirements of AQ-9, AQ-12 and AQ-29 are addressed in more detail in PTO conditions 38, 43 and 44. Both AQ-9 and AQ-12 require CEMS and an approved CEMS protocol for turbines. AQ-29 requires monitors for the SCR system. SDG&E respectfully requests AQ-9 to be the same as condition 38, AQ-12 the same as condition 43 and AQ-29 the same as condition 44. These changes will clarify current monitoring requirements and will provide consistency with the revised PTO.

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
	which shall include any relevant calculation methodologies. The monitors shall be in full operation at all times when the combustion turbine is in operation. Calibration records for the continuous monitors shall be maintained on site and made available to the District upon request.	
AQ-30 **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-30** **Obsolete**
AQ-31 Emissions of oxides of nitrogen (NOx) from each gas turbine/heat recovery steam generator train, as measured at the exhaust stack exit, calculated as nitrogen dioxide**, shall not exceed 2.0 parts per million** by volume on a dry basis (ppmvd) corrected to 15 percent oxygen. In determining compliance with this emission limitation, the following averaging periods shall apply: • During any clock hour when duct firing is occurring (a "duct-fired hour"): three-hour average, calculated as the average of the duct fired hour, the clock hour immediately prior to and the clock hour immediately following the duct-fired hour. • During any clock hour when the difference between the maximum MW produced by the generator train and the minimum MW produced by the generator train exceeds + 25 MW (a "transient hour"): three-hour average, calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour. • All other hours: one-clock hour average. Compliance with this limit shall be based on CEMS data for each unit averaged over each averaging period, or portions thereof, as applicable, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified through an initial source test and at least annual source testing thereafter.	**5-** When the unit is combusting fuel (operating), the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. The following averaging periods shall apply to CEMS data: A. During any clock hour when duct firing above 19.5 MMBTU/hr heat input is occurring (a "duct-fired hour"): 3-clock hour average, calculated as the average of the duct fired hour, the clock hour immediately prior to and the clock hour immediately following the duct-fired hour. B. For any clock hour during which the change in gross electrical output produced by the combustion turbine exceeds 50 MW per minute for one minute or longer (transient hour): 3-clock hour average, calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour. C. All other hours: 1-clock-hour average. (NSR)	**Revise AQ-31 for consistency with condition 5** **(see Appendix 2 for suggested wording)** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to clarify that NSR limits will not be achieved until the turbine is operating in Mode 6. SDAPCD determined that NSR and Rule 69.3.1 limits do not apply during startup, shutdown, low load operation, or tuning and revised Rule 69.3.1 on February 24, 2010. SDAPCD issued a revised PTO. This change is requested for consistency with the latest PTO.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-32 The emissions of carbon monoxide (CO) from each turbine shall not exceed 4.0 parts per million by volume (three-hour rolling average)on a dry basis (ppmvd) corrected to 15 percent oxygen. Compliance with these limits shall be based on CEMS data for each unit and averaged over each rolling three-hour period or portion thereof, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified through an initial emission source test and at least annual source testing thereafter.	**6-** When the unit is operating, the concentration of CO measured in the exhaust stack shall not exceed 4.0 ppmvd corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock hour averaging period shall apply to CEMS data. (NSR)	**Revise AQ-32 for consistency with condition 6** **(see Appendix 2 for suggested wording)** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to clarify that NSR limits will not be achieved until the turbine is operating in Mode 6. SDAPCD determined that NSR emission limits do not apply during startup, shutdown, low load operation, or tuning. SDAPCD issued a revised PTO. This change is requested for consistency with the latest PTO.
AQ-33 The emissions of volatile organic compounds (VOC) from each turbine, calculated as methane, shall not exceed 2.0 parts per million by volume (three-hour average) on a dry basis (ppmvd) corrected to15 percent oxygen. Compliance with this limit shall be based on District-approved source testing, the District-approved CO/VOC surrogate relationship, and on CO CEMS data for each unit, averaged over each rolling three-hour period or portion thereof, when using COCEMS data, excluding time when the equipment is operated under startup or shutdown conditions and time the equipment is not in operation. The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on initial emissions source tests and at least annual source testing thereafter.	**7-** When the unit is operating, the VOC concentration, calculated as methane and measured in the exhaust stack, shall not exceed 2.0 ppmvd corrected to 15% oxygen, except during periods of startup, shutdown, low load operation, or tuning. For purposes of determining compliance based on the CEMS, the District approved VOC/CO surrogate relationship, the CO CEMS data, and a 3-clock hour average shall be used in accordance with the CEMS protocol. The VOC/CO surrogate relationship shall be verified and/or modified, if necessary, based on source testing. (NSR)	**Revise AQ-33 for consistency with condition 7** **(see Appendix 2 for suggested wording)** **Rationale:** Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006 to clarify that NSR limits will not be achieved until the turbine is operating in Mode 6. SDAPCD determined that NSR emission limits do not apply during startup, shutdown, low load operation, or tuning. SDAPCD issued a revised PTO. This change is requested for consistency with the latest PTO.
AQ-34 Replaced by **AQ-SC11**.		
AQ-35 The maximum total dissolved solids (TDS) concentration of the reclaimed water to be used in the cooling towers shall not exceed 4,000 mg/l. This concentration shall be verified through quarterly testing of the reclaimed water by a certified lab using EPA approved methods.	**22-** The maximum total dissolved solids (TDS) concentration of the water used in the cooling towers shall not exceed 4,000 mg/l. This concentration shall be verified through quarterly testing of the water by a certified lab using EPA approved methods.	**Revise AQ-35 for consistency with condition 22** **(see Appendix 2 for suggested wording)** **Rationale:** SDAPCD issued a revised PTO and eliminated reference to "reclaimed" water. This change is requested for consistency with the latest PTO.
AQ-36 When operating without the duct burner, the emissions from each turbine shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the CEMS and/or District approved emissions source testing. Compliance with the NOx limit shall be based on each rolling one-hour averaging period or portion thereof, and compliance with	**14-** When operating with the duct burner at or below 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following limits, except during periods of startup, shutdown, low load operation, or tuning. A 3 clock-hour averaging period for these limits shall apply to CEMS data except for NOx emissions during non-transient hours	**Replace AQ-36 wording with condition 14** **Rationale:** AQ-36 and AQ-37 pertain to emission limits without or with the duct burner firing. Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006. SDAPCD determined that emission limits were based on the firing rate of the duct

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
CO and VOC limits shall be based on each rolling three-hour averaging period or portion thereof. Pollutant Emission Limit, lbs/hr Oxides of Nitrogen, NOx (calculated as NO2) 13.4 Carbon Monoxide, CO 16.3 Volatile Organic Compounds, VOC 4.0	when a 1 clock-hour averaging period shall apply. Pollutant - Emission Limit, lbs/hr: A) Oxides of Nitrogen, NOx (calculated as NO2) - 13.4 B) Carbon Monoxide, CO - 16.3 C) Volatile Organic Compounds, VOC - 4.0	burner, and issued a revised PTO. The change is requested for consistency with the latest PTO.
AQ-37 When operating with the duct burner, the emissions from each turbine shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the Continuous Emissions Monitoring System (CEMS) and continuous monitors and /or District approved emissions source testing. Compliance with the NOx, CO, and VOC limits shall be based on each rolling three-hour averaging period. Pollutant Emission Limit, lbs/hr Oxides of Nitrogen, NOx (calculated as NO2) 14.9Carbon Monoxide, CO 18.1Volatile Organic Compounds, VOC 7.3.	**15-**When operating with the duct burner firing above 19.5 MMBTU/hr heat input, mass emissions from each unit shall not exceed the following emission limits, except during periods of startup, shutdown, low load operation, or tuning. A 3-clock-hour averaging period shall apply to CEMS data. Pollutant - Emission Limit, lbs/hr A) Oxides of Nitrogen, NOx (calculated as NO2) - 14.9 B) Carbon Monoxide, CO - 18.1 C) Volatile Organic Compounds, VOC - 7.3	**Replace AQ-37 wording with condition 15** **Rationale:** AQ-36 and AQ-37 pertain to emission limits without or with the duct burner firing. Amendments to the Final Determination of Compliance were provided to SDAPCD in August 2006. SDAPCD determined that emission limits were based on the firing rate of the duct burner, and issued a revised PTO. The change is requested for consistency with the latest PTO.
AQ-38 This maximum combined fuel input into the duct burners shall not exceed 780,000 MMBtu per rolling 12-calendar month period. The project owner shall maintain a log that contains, at a minimum, the dates, times, and duct burner fuel consumption when one or both turbines are operated with the duct burners in operation. These logs shall be maintained on site for a minimum of five years and made available to District personnel upon request.	**Not in PTO**	
AQ-39 Extended startup shall be defined as the time necessary to reach minimum operating conditions for the air pollution control equipment and to meet the emission limits specified in Conditions **AQ-31** and **AQ-32**, not to exceed four hours, after initial firing of the turbine following a shutdown period of greater than or equal to 48 hours.	**28-** A startup period is the period of time that begins when fuel flows to the combustion turbine following a non-operational period. For purposes of determining compliance with the emission limits of this permit, the duration of a startup period shall not exceed 120 consecutive minutes if the steam turbine reheat bowl temperature is above 500° F when the startup period begins and shall not exceed 360 consecutive minutes if the steam turbine reheat bowl temperature is less than or equal to 500° F when the startup period begins.	**Replace AQ-39 wording with condition 28** **Rationale:** AQ-39 and AQ-40 are addressed by PTO condition 28. SDAPCD determined that the old version of Rule 69.3.1 was not appropriate for combined cycle systems and revised Rule 69.3.1 on February 24, 2010. SDAPCD issued a revised PTO. This change is requested for consistency with the latest PTO.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
AQ-40 Regular startup shall be defined as the time necessary to reach minimum operating conditions for the air pollution control equipment and to meet the emission limits specified in Conditions AQ-31 and AQ-32, not to exceed two hours in duration, after initial firing of the turbine following a shutdown period of less than 48 hours.	**Refer to condition 28**	**Delete AQ-40** **Replace by AQ-39** **Rationale:** AQ-39 and AQ-40 are addressed by PTO condition 28. SDAPCD determined that the old version of Rule 69.3.1 was not appropriate for combined cycle systems and revised Rule 69.3.1 on February 24, 2010. SDAPCD issued a revised PTO. This change is requested for consistency with the latest PTO.
AQ-41 Shutdown is defined as the period beginning with the lowering of the output of a gas turbine below 50 percent of its base capacity and below the minimum operating conditions for the air pollution control equipment, and ending when combustion has ceased.	**27**- For purposes of determining compliance with the emission limits of this permit, a shutdown period is the period of time that begins with the lowering of the gross electrical output of the combustion turbine below 64 MW and that ends five minutes after fuel flow to the combustion turbine ceases, not to exceed 65 consecutive minutes.	**Replace AQ-41 wording with condition 27** **Rationale:** SDAPCD determined that the old version of Rule 69.3.1 was not appropriate for combined cycle systems and revised Rule 69.3.1 on February 24, 2010. SDAPCD issued a revised PTO. This change is requested for consistency with the latest PTO.
AQ-42 The emissions of particulate matter less than 10 microns (PM10) shall not exceed 14.0 lbs/hr for each turbine with and without duct burner firing. Compliance with this limit shall be based on an initial emissions source test and at least annual source testing thereafter.	**11-** The emissions of particulate matter less than 10 microns (PM-10) shall not exceed 14.0 lbs/hr for each unit with and without duct burner firing.	**Revise AQ-42** **(see Appendix 2 for suggested wording)** **Rationale:** The frequency of testing is addressed in AQ-47 and PTO condition 32. This change is requested for consistency with the latest PTO.
AQ-43 through **AQ-45** **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-43** through **AQ-45** **Obsolete**
AQ-46 The District may require toxic air contaminant emissions to be quantified through source testing periodically as needed to ensure compliance with Rule 1200.	**36-** The District may require one or more of the following compounds, or additional compounds to be quantified through source testing periodically to ensure compliance with rule 1200: A) Acetaldehyde B) Acrolein C) Benzene D) Formaldehyde E) Toluene F) Xylenes If the District requires the permittee to perform this source testing, the District shall request the testing in writing a reasonable period of time prior to the testing date, and the	**No change**

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
	permittee shall submit a source test protocol to the District for written approval at least 30 days prior to the testing date.	
AQ-47 This equipment shall be source tested on at least an annual basis to show continued compliance with all applicable emissions limits, unless otherwise directed in writing by the District. An annual CEMS Relative Accuracy Test Audit (RATA), where required, may be used to fulfill the annual source testing requirement for NOx and CO. If the testing will be performed by someone other than the District, a source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test protocol shall comply with the same requirements as listed in Condition **AQ-43**. Within 60 days after completion of testing, a final test report shall be submitted to the District for review and approval.	**32**- This unit shall be source tested to demonstrate compliance with the NOx, CO, VOC, PM-10, and Ammonia emission standards of this permit, using District approved methods. The source test and the NOx and CO Relative Accuracy Test Audit (RATA) tests shall be conducted in accordance with the applicable RATA frequency requirements of 40 CFR75, appendix B, sections 2.3.1 and 2.3.3. **33**- A Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with applicable provisions of 40 CFR part 75 Appendix A and B performance specifications. At least 30 days prior to the test date, the permittee shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 21 days prior to the test so that observers may be present. **35-** Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the District for review and approval. **34**- If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing. The source test protocol shall comply with the following requirements: A. Measurements of NOX, CO, and O2 emissions shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and district Source Test, method 100, or alternative methods approved by the District and EPA. B. Measurement of VOC emissions shall be conducted in accordance with EPA Methods 25A and/or 18, or alternative methods approved by the District and EPA.	**Replace AQ-47 wording with condition 32** **Rationale:** As part of the August 2006 application for amendment of the Final Determination of Compliance, SDAPCD deleted the wording of condition AQ-47 and provided new conditions as shown to the left. SDG&E requests that condition AQ-47 is replaced with the wording of condition 32. This change is requested for consistency with the latest PTO. Please note that AQ-16 addresses condition 33 and conditions 34 and 35 will be added to the CEC conditions.

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
	C. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District ST-1B or an alternative method approved by the District and EPA. D. Measurements of PM-10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA. E. Source testing shall be performed with both the combustion turbine and the duct burner in operation. Each duct burner shall operate with a minimum heat input of 97 MMBTU/hr. F. Source testing shall be performed at the most frequently used load level, as specified in 40 CFR Part 75 Appendix A Section 6.5.2.1.d, provided it is not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the district that the unit cannot operate under these conditions. If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous level power level. G. Measurements of particulate matter emissions shall be conducted in accordance with SDAPCD Method 5 or an alternative method approved by the District and EPA. H. Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method approved by the District and EPA. I. Measurement of fuel flow shall be conducted in accordance with an approved test protocol.	
AQ-48 The emissions of any single federal hazardous air pollutant shall not equal or exceed 10 tons, and the aggregate emissions of all federal hazardous air pollutants, shall not equal or exceed 25 tons in any rolling 12-calendar month period. If emissions exceed these limits, the project owner shall apply to amend these limits and conduct a Maximum Achievable Control Technology (MACT) analysis in accordance with applicable federal U.S. EPA regulations. Compliance with this limit shall be based on District approved VOC/TAC and CO/VOC surrogate relationships and the result of District approved source	**21-** The emissions of any single Federal Hazardous Air Pollutant (HAP) shall not equal or exceed 10 tons, and the aggregate emissions of all Federal HAPs shall not equal or exceed 25 tons in any rolling 12-calendar month period. Compliance with these single and aggregate HAP limits shall be based on a methodology approved by the District for the purpose of calculating HAP emissions for this permit. If emissions exceed these limits, the permittee shall apply to amend permit to reflect applicable Federal Maximum Achievable Control Technology (MACT) standards and requirements in accordance with applicable	**No change**

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
testing.	provisions (including timing requirements) of 40 CFR Part 63.	
AQ-49 **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-49** **Obsolete**
AQ-50 For each emission limit expressed as pounds per hour or parts per million based on a one-hour averaging period, compliance shall be based on each rolling continuous one-hour period using data collected at least once every 15 minutes when compliance is based on continuous emissions data.	**Not in PTO**	**Delete AQ-50** **Replace by AQ-9** **Rationale:** Calculations are based on the approved CEMS protocol. SDAPCD determined this condition is not necessary for compliance monitoring. The deletion is requested for consistency with the latest PTO.
AQ-51 For each emission limit expressed as pound per hour or parts per million based on a three-hour averaging period, compliance shall be based on each rolling continuous three-hour period using data collected at least once every 15 minutes when compliance is based on continuous emissions monitoring data.	**Not in PTO**	**Delete AQ-51** **Replace by AQ-9** **Rationale:** Calculations are based on the approved CEMS protocol. SDAPCD determined this condition is not necessary for compliance monitoring. The deletion is requested for consistency with the latest PTO.
AQ-52 All records required by Conditions **AQ-1** through **AQ-55** shall be maintained on site for a minimum of five years and made available to the District upon request.	**46-** All records required by this written permit shall be maintained on site for a minimum of five years and made available to the District upon request. (Title V)	**Revise AQ-52** **(see Appendix 2 for suggested wording)**
AQ-53 Pursuant to 40 CFR 72.30(b)(2)(ii) of the Federal Acid Rain Program, the project owner shall submit an application for a Title IV Operating Permit at least 24 months prior to the initial startup of this equipment.	**3-** The permittee shall comply with all the applicable provisions of 40 CFR 73, including requirements to offset, hold and retire SO2 allowances.	**Replace AQ-53 wording with condition 3** **Rationale:** AQ-53 is obsolete. The requirement shown in condition 3 is not in the CEC conditions. It is requested that AQ-53 is replaced with the wording of condition 3 for consistency with the latest PTO.
AQ-54 The project owner shall comply with the continuous emission monitoring requirements of 40 CFR Part 75.	**See AQ-13 and APCD 37.**	**No change** **Details are addressed under AQ-13**
AQ-55 **(See Appendix 4 – Obsolete Conditions)**	**Not in PTO**	**Delete AQ-55** **Obsolete**

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
Additional Conditions in SDAPCD PTO(s) but not in CEC conditions		
Not in CEC Conditions	**4**-For purposes of determining compliance based on source testing, the average of three subtests shall be used. For purposes of determining compliance with emission limits based on the CEMS, data collected in accordance with the CEMS protocol shall be used and averaging periods shall be as specified herein.	**Add**
Not in CEC Conditions	**10**-When the unit is operating, the concentration of oxides of Nitrogen (NOx), calculated as nitrogen dioxide (NO2) and measured in the exhaust stack, shall not exceed 42 ppmvd corrected to 15% oxygen, calculated over each clock hour period except for periods of Startup or Shutdown, as defined in Rule 69.3. All CEMS calculations, averages shall be performed in accordance with the CEMS protocol approved by the District. [Rule 69.3.]	**Add**
Not in CEC Conditions	**12-**The discharge of particulate matter from the exhaust stack of the unit shall not exceed 0.10 grains per dry standard cubic foot (0.23 grams/dscm). The District may require periodic testing to verify compliance with this standard. (Rule 53)	**Add**
Not in CEC Conditions	**13-**Visible emissions from the lube oil vents and the exhaust stack of the unit shall not exceed 20% opacity for more than three (3) minutes in any period of 60 consecutive minutes. (Rule 50)	**Add**
Not in CEC Conditions	**23**-When combusting fuel, ammonia shall be injected at all times that the SCR outlet temperature is 510 degrees Fahrenheit or greater.	**Add**
Not in CEC Conditions	**24**-The ammonia injection flow rate shall be continuously measured, recorded and controlled. The ammonia injection flow control equipment shall be installed, calibrated and maintained in accordance with a District approved protocol.	**Add**

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
Not in CEC Conditions	**26**-The concentration of ammonia solution used in the ammonia injection system shall be less than 20% ammonia by weight. Records of ammonia solution concentration shall be maintained on site and made available to district personnel upon request.	**Add**
Not in CEC Conditions	**29**-Low load operation is a period of time that begins when the gross electrical output (load) of the combustion turbine is reduced below 64 MW from a higher load and that ends 10 consecutive minutes after the combustion turbine load next exceeds 64 MW provided that fuel is continuously combusted during the entire period and one or more clock hour concentration emission limits specified in this permit are exceeded as a result of the low-load operation. Periods of operation at low load shall not exceed 130 minutes in any calendar day nor an aggregate of 780 minutes in any calendar year, and no period of operation at low load shall begin during a startup period.	**Add**
Not in CEC Conditions	**30**-Tuning is defined as adjustments to the combustion system that involves operating the unit in a manner such that the emissions control equipment may not be fully effective or operational. Only one combustion turbine will be tuned at any given time. Tuning events shall not exceed 480 minutes in a calendar day nor exceed 40 hours in a calendar year The District compliance division shall be notified at least 24 hours in advance of any tuning event.	**Add**
Not in CEC Conditions	**31**-A CEMS Protocol is a document approved in writing by the APCD M&TS division that describes the Quality Assurance and Quality Control procedures for monitoring, calculating and recording stack emissions from the unit.	**Add**
Not in CEC Conditions	**34**- If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing. The source test protocol shall comply with the following requirements: A. Measurements of NOX, CO, and O2 emissions shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and district Source Test, method 100, or	**Add**

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
	alternative methods approved by the District and EPA. B. Measurement of VOC emissions shall be conducted in accordance with EPA Methods 25A and/or 18, or alternative methods approved by the District and EPA. C. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District ST-1B or an alternative method approved by the District and EPA. D. Measurements of PM-10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA. E. Source testing shall be performed with both the combustion turbine and the duct burner in operation. Each duct burner shall operate with a minimum heat input of 97 MMBTU/hr. F. Source testing shall be performed at the most frequently used load level, as specified in 40 CFR Part 75 Appendix A Section 6.5.2.1.d, provided it is not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the district that the unit cannot operate under these conditions. If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous level power level. G. Measurements of particulate matter emissions shall be conducted in accordance with SDAPCD Method 5 or an alternative method approved by the District and EPA. H. Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method approved by the District and EPA. I.Measurement of fuel flow shall be conducted in accordance with an approved test protocol.	
Not in CEC Conditions	**35-** Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the District for review and approval.	**Add**

APPENDIX 3
SIDE-BY-SIDE COMPARISON (CONTINUED)

CEC AQ Condition August 2003 P800-03-009	Condition(s) from SDAPCD PTO	Change Proposed for CEC
Not in CEC conditions	**39-**When the CEMs is not recording data and the unit is operating, hourly NOx emissions the emission calculations shall be determined in accordance with 40 CFR 75 Appendix C. Additionally, hourly CO emissions for the annual emission calculations shall be determined using the hourly emission rate recorded by the CEMs during the most recent hours in which the unit operated 3 continuous hours at no less than 80% of full power rating. Alternate CO emission factors shall be determined from compliance source test emissions data. The alternate hourly CO emission rate shall be reviewed and approved by the District, in writing.	**Add**
Not in CEC Conditions	**40**-Any violation of any emission standard as indicated by the CEMs shall be reported to the District's Compliance Division within 96 hours after such occurrence.	**No change** **Condition 40 is incorporated by reference in condition 41 (i.e., Rule 19.2 (d)).**
Not in CEC Conditions	**45-** Operating logs or Data Acquisition System (DAS) records shall be maintained to record the beginning and end times and durations of all startups, shutdowns, low load operations, and tuning periods to the nearest minute; quantity of fuel used (in each clock hour, calendar month, and 12 calendar month period) in standard cubic feet; hours of daily operation; and total cumulative hours of operation during each calendar year.	**Add**
Not in CEC Conditions	**48-** This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.	**No change** **Not relevant to Air Quality Compliance Operations**
Not in CEC Conditions	**49-**The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)	**Add**

APPENDIX 4

OBSOLETE CONDITIONS

APPENDIX 4
OBSOLETE CONDITIONS
(These conditions requested to be deleted entirely)

Obsolete Construction Conditions

AQ-SC1 The project owner shall fund all expenses for an on-site Air Quality Construction Mitigation Manager (AQCMM) who shall be responsible for maintaining compliance with conditions AQ-SC2 through AQ-SC4 for the entire project site and linear facility construction. The on-site AQCMM shall have full access to areas of construction of the project site and linear facilities, and shall have the authority to appeal to the CPM to have the CPM stop any or all construction activities as warranted by applicable construction mitigation conditions. The onsite AQCMM shall have a current certification by the California Air Resources Board for Visible Emission Evaluation (U.S. EPA Method 9) prior to the commencement of ground disturbance. The on-site AQCMM shall not be terminated without written consent of CPM.

AQ-SC2 The project owner shall provide a construction mitigation plan, for approval, which shows the steps that will be taken, and reporting requirements, to ensure compliance with conditions AQ-SC3 and AQSC4.

AQ-SC3 The on-site AQCMM shall submit to the CPM, in the Monthly Compliance Report (MCR), a construction mitigation report that demonstrates compliance with the following mitigation measures:

a) All unpaved roads and disturbed areas in the project and linear construction sites shall be watered until sufficiently wet for every four hours of construction activities. The frequency of watering can be reduced or eliminated during periods of precipitation.

b) No vehicle shall exceed 15 miles per hour within the construction site.

c) The construction site entrances shall be posted with visible speed limit signs.

d) All construction equipment vehicle tires shall be washed or cleaned free of dirt prior to entering paved roadways.

e) Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

f) All entrances to the construction site shall be treated with dust soil stabilization compounds.

g) Construction vehicles must enter the construction site through the treated entrance roadways.

h) Construction areas adjacent to any paved roadway shall be provided with sandbags to prevent run-off to the roadway.

i) All paved roads within the construction site shall be swept twice daily when construction activity occurs.

j) At least the first 500 feet of any public roadway exiting from the construction site shall be swept twice daily when construction activity occurs.

k) All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or be treated with appropriate dust suppressant compounds.

l) All vehicles that are used to transport solid bulk material on public roadways and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.

m) Where appropriate, construction areas that may be disturbed shall be equipped with windbreaks at the windward sides prior to any ground disturbance. The windbreaks shall remain in place until the soil is stabilized or permanently covered with vegetation.

n) Any construction activities that can cause fugitive dust shall cease when the wind exceeds 25 miles per hour.

o) All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.

p) All large construction diesel engines that have a rating of 100 hp or more, shall meet, at a minimum, the 1996 CARB or U.S. EPA certified standards for off-road equipment.

q) All large construction diesel engines, which have a rating of 100 hp or more, shall be equipped with catalyzed diesel particulate filters (soot filters), unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types.

r) All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM that shows the engine meets the conditions **AQ-SC3**(p) and **AQ-SC3**(q) above.

AQ-SC4 No construction activities are allowed to cause visible emissions at or beyond the project site fenced property boundary. No construction activities are allowed to cause visible plumes that exceed 20 percent opacity at any location on the construction site. No construction activities are allowed to cause any visible plume in excess of 200 feet beyond the centerline of the construction of linear facilities.

AQ-SC5 The project owner shall surrender the emission offset credits listed in the table below or a modified list, as allowed by this condition, at the time that surrender is required by Air Quality Condition **AQ-49**. If additional ERCs are submitted consistent with Air Quality Conditions **AQ-17** and **AQ–49**, the project owner shall submit an updated table including the additional ERCs to the CPM. The project owner shall request CPM approval for any substitutions, modifications, or additions of credits listed.

The CPM, in consultation with the District, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, the requested change(s) clearly will not cause the project to result in a significant environmental impact, and each requested change is consistent with applicable federal and state laws and regulations. If provided to increase maximum allowable emissions from 104.3 tons per year of NOx emissions to 124.4 tons per year pursuant to Condition **AQ-49**, Class A ERCs issued by the District and meeting the standards of District Rule 26.1 are presumed to satisfy these criteria. If other than Class A ERCs are proposed, then the U.S. EPA shall also be consulted.

District ERC Number	NOx-Equivalent (tpy)
ERC 000111-01	17.5
ERC 000111-02	0.15 (from 0.3 tpy VOC)
ERC 010228-01	7.6 (from 15.2 tpy VOC)
ERC 921291-01	20.8
ERC 921291-02	0.5 (from 1.0 tpy of VOC)
ERC 976993-01	10.5 (from 21.0 tpy of VOC)
ERC 020130-02	3.6
No ERC number, diesel engine replacement	26.0
No ERC number, boiler replacement	38.5

AQ-SC6 The project owner shall submit to the CPM for review and approval any modification proposed by either the project owner or issuing agency to any project air permit.

AQ-SC10 The project owner shall provide $1.86 million, for programs of the San Diego County Air Pollution Control District to mitigate potential PM10 and PM10 precursor impacts in the region around the Palomar Energy Project. The payment shall be provided to the District, which will allocate the funds to programs expected to provide reductions in the specified area. The $1.86 million payment includes an administration fee of no greater than ten percent to the District for costs to advertise, evaluate, contract and administer diesel source emission reduction projects.

The project owner shall provide the $1.86 million in two installments. The first installment will be in the amount of $1.57 million for projects and District costs, and will be submitted to the District no later than the date of delivery of the first combustion turbine to the project site. The project owner shall provide the remaining $290,000 to the District no later than the date of surrendering the additional Emission Reduction Credits described in **AQ-49**.

APPENDIX 4
Obsolete Conditions (Continued)

The project owner shall demonstrate that a good faith effort has been made to develop an agreement with the District to include the following:

1) the District shall provide the project owner with a quarterly report that includes a description of the funded mitigation or contracted projects, the cost of each project, and estimated cost-effectiveness of the emission reduction projects;

2) for up to two years from the date of a payment by the project owner, the District will give first right of refusal to diesel source mitigation projects in the Escondido area;

3) the District shall actively pursue mitigation projects by advertising through its Carl Moyer Program, Lower Emission School Bus Program, and Vehicle Registration Fund Program, as well as working directly with projects that may be developed by the project owner or in the course of normal district business;

4) if, after two years from the date of payment, the District has been unable to identify sufficient projects to expend all fees paid, the project owner shall assist in identifying additional diesel source mitigation projects throughout the North San Diego County area; and

5) the District shall restrict use of fees paid to diesel source reduction projects in the North San Diego County area, only.

AQ-4 The project owner shall obtain any necessary District permits and Energy Commission approval for all ancillary combustion equipment including emergency engines, prior to on-site delivery of the equipment

AQ-5 The exhaust stacks for each turbine power station shall be at least 110 feet in height above site base elevation.

AQ-6 The project owner shall submit to the District the final selection, design parameters and details of the selective catalytic reduction (SCR) and oxidation catalyst emission control systems. Such information may be submitted to the District as trade secret and confidential pursuant to District Rules 175 and 176.

Obsolete Commissioning Conditions

AQ-23 Beginning at initial startup of each turbine, a “Commissioning Period” for each turbine shall commence. This Commissioning Period shall end 120 days after initial startup or immediately after written acceptance of clear custody and control of the equipment is turned over to the project owner, or after not more than 300 hours of gas turbine operation whichever comes first. During the Commissioning Period, only the emission limits specified in Conditions Nos. **AQ-17,18, 19, 20, 21, 24, 25, 26** and **27** shall apply.

AQ-28 After the end of the Commissioning Period for each turbine, the project owner shall submit a written progress report to the District. This report shall include, at minimum, the date the Commissioning period ended, the periods of startup, the emission of NOx and CO during startup, and the emissions of NOx and CO during steady state operation with and without duct burner firing. NOx and CO emissions shall be reported in both ppmv at 15 percent O2 and lbs/hr. This report shall also detail any turbine or emission control equipment malfunction, upset, repairs, maintenance, modifications, or replacements affecting emissions of air contaminants that occurred during the Commissioning Period

AQ-30 For the purpose of the Determination of Compliance and Authority to Construct, the period described as “on-going” operations of the turbines shall commence immediately following the end of the Commissioning Period. Condition Nos. **AQ-17, 18, 19, 20, 21, 24, 26,**and **27** shall continue to apply during on-going operations.

AQ-49 Prior to the initial startup of this equipment, the project owner shall surrender to the District Class A Emission Reduction Credits (ERCs) in an amount equivalent to 125.2 tons per year of NOx to offset the maximum allowable of 104.3 tons per year of NOx emissions for this facility. When additional offsets are available up to 149.3 tons per year, maximum allowable emissions will increase to the maximum potential of 124.4 tons per year of NOx emissions. The CPM may approve any such change to the ERC list contained in Air Quality Condition **AQ-SC5** based on the criteria provided in **AQSC5.**

APPENDIX 4
Obsolete Conditions (Continued)

Obsolete Operational Conditions

AQ-10 At least 60 days prior to initial startup of the gas turbines, the project owner shall submit a protocol to the District, for written approval, that shows how the permanent CEMS will be able to meet all District monitoring requirements and measure NOx emissions at a level of 2.0 ppmv.

AQ-11 The project owner shall submit a protocol to the District for approval which shall specify a method of determining the CO/VOC surrogate relationship that shall be used to demonstrate compliance with all VOC emission limits.

AQ-43 Within 30 days after completion of the Commissioning Period, an initial emissions source test shall be conducted by an independent, CARB approved tester at the project owner's expense to show compliance with all applicable emission limits. A source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test protocol shall comply with the following requirements:

a) Measurement of oxides of nitrogen (NOx), carbon monoxide (CO),and stack gas oxygen shall be conducted in accordance with the San Diego Air Pollution Control District Method 100, or equivalent, as approved by the District Air Pollution Control Officer.

b) Measurements of particulate matter less than 10 microns shall be conducted in accordance with the U.S. Environmental Protection Agency (U.S. EPA) Methods 201A and 202 or equivalent, as approved by the District Air Pollution Control Officer.

c) Measurements of volatile organic compounds (VOC) shall be conducted in accordance with San Diego Air Pollution Control District Methods 25A and / or 18, or equivalent, as approved by the District Air Pollution Control Officer.

d) Measurement of ammonia shall be conducted in accordance with BAAQMD ST-1B, or equivalent, as approved by the District Air Pollution Control Officer.

e) Source testing shall be performed at no less than 80 percent of the maximum fired capacity for the combined-cycle system

AQ-44 Within 30 days after completion of the Commissioning Period, an initial emissions source test shall be conducted by an independent, CARB approved tester at the project owner's expense to determine the emissions of toxic air contaminants (TAC). A source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test will not include testing of the cooling towers. At a minimum the following compounds shall be tested for and emissions, if any, quantified:

- Acetaldehyde
- Acrolein
- Benzene
- Formaldehyde
- Toluene
- Xylenes

This list of compounds may be adjusted by the District based on source test results to ensure compliance with District Rule 1200 is demonstrated. The District may require one or more or additional 147 compounds to be quantified through source testing as needed to ensure compliance with Rule 1200.

AQ-45 A final source test report shall be submitted to the District and the CPM for review and approval. The testing contractor shall include, as part of the test report, a certification that to the best of its knowledge the report is a true and accurate representation of the test conducted and the results.

AQ-55 The project owner shall submit an application to the District for a Federal (Title V) Operating Permit, in accordance with District Regulation XIV within 12 months after initial startup of this equipment.